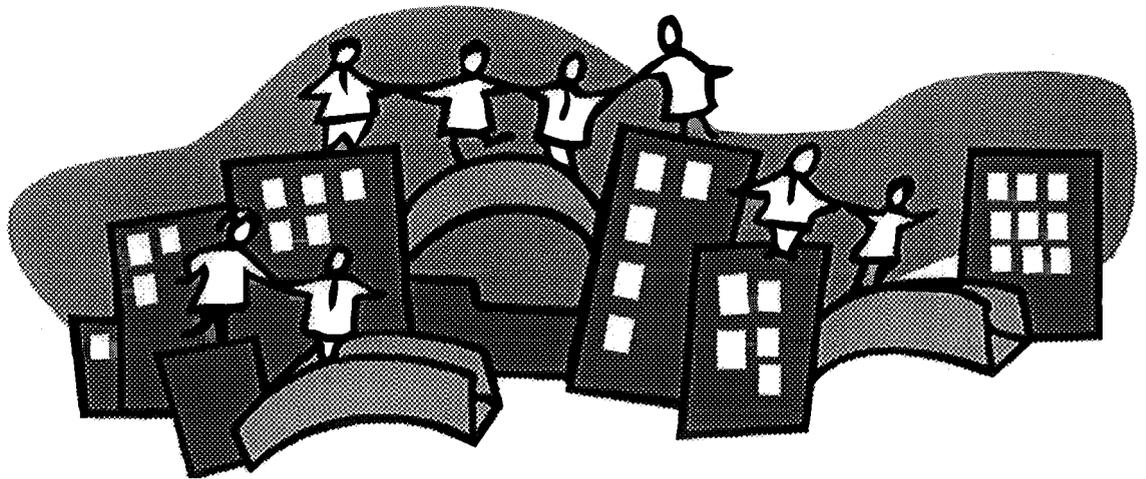


Community Indicators Project

FINAL REPORT



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Submitted to:

**Behaviorial Intervention Research Branch
Division of HIV/AIDS Prevention
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Project Overview

History

The community indicators project was created to identify community characteristics that influence risk behavior and could be measured and changed in a community-level HIV/AIDS intervention research trial. The goal was to develop an ecological model for prioritizing community characteristics to be changed as well as suggesting causal mechanisms linking community characteristics to behavior and sustainability of interventions.

The project began in September 1996 and concluded in July 1999.

Project Activities

Literature Review

A literature review, drawing from the fields of Public Health, Urban Studies, Sociology, Political Science, and other social and behavioral sciences, was conducted to synthesize what is currently known about relevant community-level characteristics, as well as the analytic strategies used for community-level variables.

Identification of Indicators

A modified Delphi technique was conducted to generate a list of community indicators for HIV intervention research projects.

- **Phase 1:** A group of 25 individuals who are experts in intervention research, community-level interventions, community competence and capacity and HIV prevention were identified and recruited by CDC project staff and Macro International staff to serve on a panel. A survey was developed by Macro staff and approved by CDC project staff. Participants were asked to complete the survey to generate potential community indicators for community characteristics relevant to HIV intervention research activities. Participants mailed their responses to Macro staff. In all, 2,454 potential indicators were suggested. A compilation of all potential community characteristics and their associated indicators was developed for use in Phase 2.
- **Phase 2:** A subgroup (n=10) of Phase 1 participants were invited to a meeting in Atlanta. During the meeting, participants reviewed and refined the summary document developed during Phase 1. In particular, they discussed the conceptual model, the criteria for selecting potential indicators, and the relevance and clarity of potential indicators. They added important or missing indicators and deleted those considered unimportant or clearly not feasible. They arrived at a total of 200 potential indicators within three categories: men who

have sex with men, injecting drug users, and women living in high risk environments. At the close of the meeting, participants asked for clarity regarding definitions of community and the purpose of the project. A **summary** of the proceeding was compiled by Macro staff.

- **Phase 3:** Original plans to provide the draft indicators to the 25 participants for ranking were canceled. Instead, the project was put on hiatus due to staffing changes at CDC.
- **Phase 4:** After a change in personnel at CDC, the project resumed in the last quarter of 1998. The existing materials (e.g., literature review, lists of indicators nominated by experts, and draft documents) were reviewed and alternative directions for the project were considered. The literature review indicated that most indicator work in HIV had dealt with proximal epidemiological indicators, rather than the kind of social context variables that were expected to be used as community indicators. The most developed community indicator research had looked at social structural variables; however, this research had occurred with social and health issues other than HIV. Most of the indicators nominated through the initial round of the Delphi process had not been investigated with respect to HIV. In fact, many had not been systematically investigated at all. Thus, it was apparent that there were many variables believed to be of importance that needed further investigation. Consequently, the emphasis of the project shifted toward developing guidelines for development and testing of community indicators for HIV prevention planning and evaluation.

The next step was to organize and conduct a meeting that included potential “end users” of indicators. This meeting took the place of an additional Delphi round and included academic researchers, CBO officials, and government scientists, all of whom had experience working in multiple sectors (e.g., the academic researchers had experience working with local health departments and/or CBOs). Several non-HIV investigators were invited because they had extensive experience with community indicators in other, relevant research areas (e.g., substance abuse and social welfare). The intent of the meeting was to obtain feedback that would help in refining a working model and providing input regarding methods that might be used to elicit and evaluate potential community indicators.

APPENDICES

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Literature Review for Community Indicators

A. Introduction

Since the late 1980s the Centers for Disease Control and Prevention (CDC) has been integrally involved in the development, evaluation, and support of community-level interventions for HIV prevention. During the last three years, the agency has made funding available specifically for the implementation of community-level interventions (CLIs) by community-based organizations. The Requests for Proposals and Supplemental Guidance for HIV Prevention Community Planning encourage communities to consider the CLI as one component of their strategic approach to HIV prevention. The CLI methods developed by CDC staff and their prevention partners have built on a large and growing history of community-level interventions conducted both domestically and internationally.

As the nation's public health leader for prevention and health promotion, the CDC must continue to apply cutting-edge science to the substance of the CLIs and the methods to evaluate them. Practical interventions must incorporate the rich scientific findings from a variety of disciplines and the programmatic experience of practitioners working in diverse areas (including crime and delinquency prevention, drug prevention, and cardiovascular health promotion among others).

In the several projects funded by the CDC, the measures used to evaluate the impact of the community-level intervention have consisted primarily of psychosocial and behavioral variables aggregated across samples of individuals in the community. Because the unit of intervention in these projects is the community, it is important to explore alternative units of analysis at the community level that reflect the community context or social ecology in which individual behaviors occur (see, for example, Trickett, 1987; Vincent & Trickett, 1983). An initial review conducted by staff at the CDC determined that there has been limited development and use of community-level measures for evaluating HIV prevention. The purpose of this literature review is to begin surveying a broad array of literature to

- catalogue the community-level measures used in other programs outside of HIV prevention,
- infer variables from studies where community-level measures *per se* were not used, and
- synthesize this information and relate the findings to relevant issues in HIV prevention.

Furthermore, this review will consider both those variables 1) that are potentially malleable through intervention and 2) those that may be difficult or impossible to change but which may be related to the prevalence of risk behaviors or to the likelihood of successful implementation of a community-level intervention. We conclude with a summary of this review's implications for both the content and evaluation of community-level interventions.

B. The Role of “Community” in Public Health and HIV Prevention

I. The evolution of “community” in public health

Public health has seen a gradual shift from a focus on the infectious nature of disease to the role of individuals’ lifestyles in the prevention and control of illness and injury. While the roles of behavior and lifestyle have been widely accepted and embraced by the public health community, the next shift—an understanding and accommodation of the role of “community” in influencing health-related behaviors—has had a more erratic history. The role of community was recognized widely as early as the 1920s, when sociologists Park and Burgess (1925) noted the relationship between the community factors and various social and health conditions. In the 1960s, Alinsky (1962, 1971) raised public consciousness about the importance of community activism as a necessary mechanism for improving health conditions and for preventing social disintegration. In the ‘70s and ‘80s, community-level interventions for a variety of health-related issues multiplied. North Karelia, MRFIT, Stanford 3- and 5-Cities became the exemplary activities in public health (see Altman, 1986, 1995a, 1995b; Farquhar, Maccoby, & Solomon, 1984; McAlister, Puska, Salonen, Tuomilehto, & Koskela, 1982). Yet, even with the increased scientific and programmatic activity around CLIs, the ensuing two decades have seen uneven support (both professional and financial) for the dissemination and refinement of community-level approaches.

II. Health occurs in a matrix of community systems

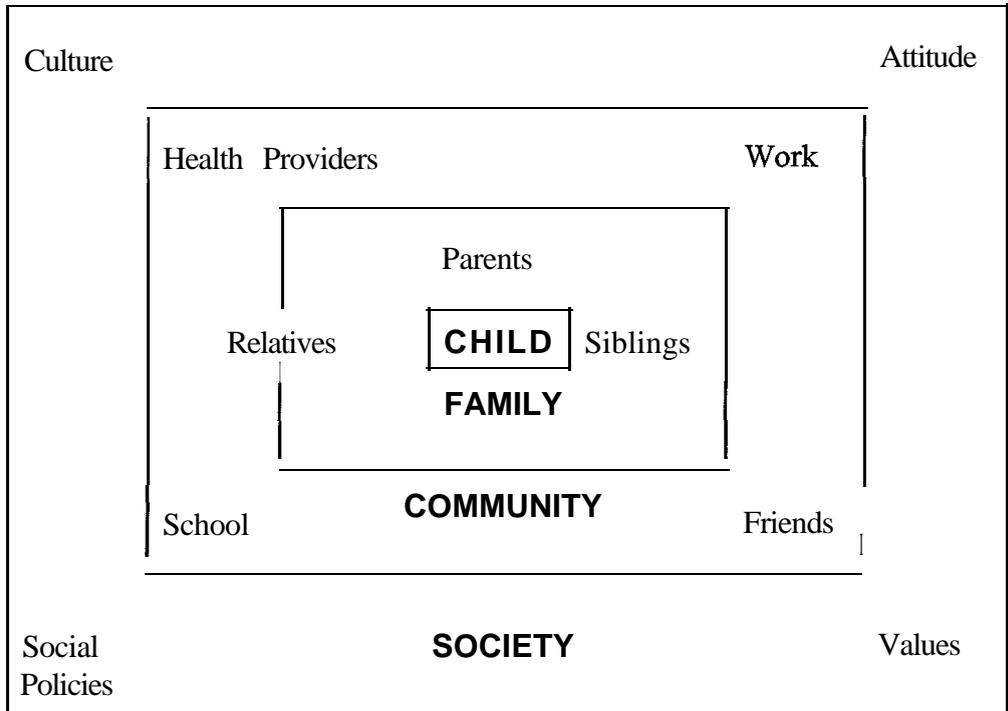
Patterson and Garwick (1994) have succinctly stated the basic premise for an emphasis on *community* in public health. They state that “Disease occurs within a hierarchy of systems that are interrelated.. . It is one of the basic assumptions of systems theory that a change in one part of the system leads to a change in other parts of the system as well.” Trickett (1987) also addresses this interdependence of systems, noting that behavior occurs within a sociocultural matrix. The activities which occur in one system (e.g., a child’s school behavior) will affect — and be affected by—activities occurring in other systems (e.g., the home environment). Community perspectives on public health tend to encompass a social ecological model of health that takes into account multiple sectors, or systems within which individuals live, work, and play.

Importantly, such a perspective also takes into account the relationships among these systems (Flynn, Rider, & Ray, 1991). Health promotion, in this model, is the process of enabling people to increase control over and improve their own health. Control over their health requires creation of supportive environments within which healthy living can take place; creating such environments assumes changes in these multiple sectors, with the complex interrelationships that exist among them. The following table shows some of typical systems that are likely to have an impact on health or the behaviors that determine one’s health.

Table 1. Typical community systems relevant to public health

TYPICAL COMMUNITY SYSTEMS RELEVANT TO PUBLIC HEALTH (terms in parentheses show variations in nuance across authors)			
AUTHORS			
SYSTEM	Eng and Parker	Thompson, Wallack, Lichtenstein, and Pechacek	McAllister and O'Shea
Government	✓	(Political)	(governmental agencies and offices)
Economy	✓	✓	(Commerce and business)
Education	✓	✓	Educational institutions
Religion	✓	✓	
Health and Welfare	✓	✓	Medical care institutions and practices
Voluntary Associations		✓	✓
Recreation		✓	
Social		✓	<ul style="list-style-type: none"> • Neighborhoods • Families • Informal networks of association
Communication			✓

Patterson and Garwick (1994) offer a graphic depiction of some of these relationships among sectors with the individual as the hub of the system. Their depiction of these relationships among systems-in this case, with respect to children-includes families, community, and the larger society.



III. Definitions of Community

The social science, political science, economic and other bodies of literature are fraught with use of the term “community.” The word “community” has been appended to many concepts (e.g., community development, community empowerment, sense of community), each use tinged with its own nuance. These factors make the literature on “community”-relevant variables and interventions difficult to organize and synthesize. Thus, it is important to begin with a discussion of these definitions to establish shared understanding of the common features used across authors.

Geography, Relationships, and Power

Many of the definitions of “community” found in the literature reviewed here, correspond with Eng and Parker’s (1994) taxonomy that proposes that definitions of community generally include one or more of three elements:

geographic elements: shared physical location’

relational elements: functions of ties among organizations, neighborhoods, families, and friends

political elements: people coming together to set a political dynamic in motion to transform and act on issues they face

The description of community offered by Chavis and Wandersman (1990) — community is seen as a place (Gusfield, 1975), relationships (Heller, 1989) and collective political power (Suttles, 1972)—parallels Eng and Parker’s triad of elements.

Geographic Definitions. Relatively few of the definitions of community were comprised solely of geographic elements. The definition proposed by Peterson, Hawkins, and Catalano (1992) describes a community as “a shared geographic locality (such as a town or city) or a shared identity (such as ethnic communities).” They suggest that it should be within some geographically delineated bounds to increase the likelihood of a shared identity, that is, that the people within it share some sense of being members of that community. Yet even in this geographically dominated definition, these authors later add that a community “must have an administrative or social structure available for the community mobilization process.” Thus, they point to a political element of the community, albeit one with a distinct purpose in their case (i.e. community mobilization).

Relational Definitions. Several authors highlight the importance of interpersonal and interorganizational relationships in communities. Plaut and colleagues capture this aspect of community, describing them as small social groups based on traditional kinship ties and land holdings (Plaut, Landis, & Trevor, 1992). Drawing heavily on the concepts of social network theory, Kasarda and Janowitz (1974) define community as

“a complex system of friendship and kinship networks, and formal and informal associational ties rooted in family life and ongoing socialization processes. [The] focus is on social and organizational networks of local residents.”

Political Definitions. Activists and researchers who follow the work of Saul Alinsky (1962, 1971) tend toward the more political aspects of community definitions. Describing the “Alinsky view of neighborhoods” (‘neighborhoods’ being their operationalization of ‘community’), Marquez (1990) refers to “units of ‘collective consumption’ which can be motivated by the common self interest. Effective political groups result from the building of consumer oriented interests groups defined by geography.”

Integration of Geography, Relationships, and Politics. As might be expected, some authors acknowledge pairs or all three elements in their definitions of community. This is seen in Warren’s definition, “A local combination of people, organizations and systems which performs functions of economic exchange, socialization, control, participation and social support. (Warren, 1978, cited in McAlister & O’Shea, 198 1). As another example, Thompson and associates (Thompson, Corbett, Bracht, & Pechacek, 1993) describe a community as a “group of people sharing a locality, being interdependent, having interpersonal relationships, and a sense of belong to the larger entity.”

Identity, Norms, and Values

The last characteristic in the definition by Thompson and colleagues — a sense of belonging to the larger entity — provides a bridge to another set of definitions. These are definitions that revolve around shared identity, norms, and values. One example that captures the major thrust of this set was provided by Israel (1985). She contends that “community” implies that members have a sense of identity and belonging, shared values, norms, communications and helping patterns. According to her, the purpose of community is to maintain the physical and social environment, providing help and support in times of stress, and helping members achieve a sense of self worth. With respect to spatial dimensions, Israel believes that community may be geographically bounded, but that aspect is not necessary for the definition. Similarly, Shaw (1988) describes a community as “a group of people who identify themselves as linked by culture, social organization, language, common experience, or fate.”

Other conceptions of “community”

Hawe (1994) provides another trichotomy that also offers assistance in sorting out the meaning of community for HIV prevention studies. She suggests that the term “community” has three popular connotations:

- Community as Population
- Community as Setting
- Community as Social System

As we will see, each has very different implications for understanding the target of interventions and the nature of change that might occur in various populations.

Community as Population. This use of the term may be best illustrated in large scale community interventions propelled by the concern to *reach as many people as possible* and make best use of scarce program resources. Extensive use of mass media is one obvious example of trying to reach a broad population that, in some senses (e.g., geographic proximity), comprise a community. “Population” is used here as a synonym for an aggregation of individuals; thus, outcomes are evaluated as the sum total of the relevant changes made by individuals. The resulting efficacy of the intervention would be expressed as a proportional change for the population (“the more the change, the better the intervention”).

Community as Setting. Hawe (1994) contends that the second meaning of community has to do with the geographic, structural, and social backdrop in which an intervention takes place and the ways that those features can support and maintain individual behavior change. In this context, for example, community leaders are valued because of their capacity to translate the health messages to the local residents, facilitated by “community organization”. If addressed at all, issues like community involvement and cooperation with the program are likely to be viewed as a means to an end rather than as goals with independent value to the community.

Community as Social System. The third use of the concept of community focuses on the integrated nature of communities, each of which possesses unique human and structural resources and organic relationships among individuals and among organizations. This ecological perspective views the community as an “ecosystem with its own community identified problems.” (Hawe, 1994). The task for a health promotion intervention is to harness and enhance the natural problem solving and helping processes in the community. Program success is viewed in terms of community processes, shifts in power, and changes in policies and structures.

This conception captures much of the most recent discussion about the “new public health” and the optimal relationship between government, health and public health professionals, and the broader community. As the Ottawa Charter (WHO, 1986) states, “Health promotion works through concrete and effective community action in setting priorities, making decisions, planning strategies, and implementing them to achieve better health. At the heart of this process is the empowerment of communities, their ownership and control of their own endeavors and destinies.”

Bronfenbrenner (1979; Bronfenbrenner & Weiss, 1983) described this ecological perspective as being comprised of multiple units of analysis beyond the individual. The smallest unit he termed the *microsystem* that is composed of two or more people in a specific setting such as the family. At the other end of the spectrum is the *macrosystem* which relates to the impact of culture and structural influences on individuals. Mediating these two levels is the *mesosystem*; it is comprised of the relationship between microsystems or between a micro- and a macrosystem.

Summary

The definitions discussed above answer two questions about *community* — “**what comprises a community?**” and “**what can the community do?**” There are a few generalizations and implications that can be made from these definitions and the traditions in which they are embedded.

People in places. First, *community* always describes a unit larger than the individual. Whether this aggregate is defined by proximity and geography, interpersonal relationships, a common cultural bond, or self-identification with a group, communities are exponentially more complex and intricate than the sum of the individuals comprising them. Each of the multiplex relationships of individuals with others in their family, neighborhood, or city affect the cognitive, emotional, and social behaviors of the individual. While the goal in public health is often to promote the health of individuals, public health professionals cannot ignore the community context that affects all the individuals living within it.

Geography and setting are clearly important features of communities, but they are not necessarily sufficient in and of themselves to describe or explain a **community**. Geography can sometimes establish a context in which a **community’s** people live and work and play (e.g., proximity to a river, isolation from other groups of people, or access to resources). Structural features also play important roles in the opportunities and obstacles faced community residents. Yet, these features can also be capitalized on to bear to increase residents’ opportunities for self-determination and improve their well-being.

Most authors point to the social nature of communities. The definitions reviewed tend to point to aspects of the social contract: interpersonal relationships and cultural identification. People comprise communities and people interact with one another-in families, in friendships, in workplaces, and in professional service settings. Understanding the nature, breadth, and intensity of interpersonal relationships is critical to public health professionals. Descriptively, this information will define an important context in which health- and risk-related behaviors occur. Instrumentally, there may be ways of using or enhancing relationships to modify the behaviors of its members.

Similarly, the concepts of identity, culture, and norms describe an integral part of what it means to be apart of a community. While culture describes the more objectively viewed traditions and values of a group, identity here is used to denote the individuals' sense of belonging to a discrete group or place. There are obvious implications for both the role of tradition in influencing the behavior of community residents and the investment in group or place that is likely to come with a strong sense of identity that is tied up in one's community. Norms might represent the nexus of community and identity. Norms represent the individuals' understanding of what the group's condoned (or tolerated) beliefs and actions are and the sanctions that are contingent on adherence with them. Norms are a critical aspect of culture, but the extent to which an individual is motivated by them may be a factor of his or her sense of attachment to that group. That is the lower the identification with the group, the less will culture and norms play a role in the individual's decision-making.

Politics, power, and problem-solving. The second question answered by definitions of community, "What can communities do?", addresses the purpose and potential of communities. Many authors are concerned with the characteristics and strengths of the community per se, not only as a vehicle for the improvement of the lives of individuals. For many, the primary feature of communities is their ability to solve problems and otherwise wield power. Communities differ in the extent to which they organize strategically to identify problems, identify and mobilize resources, interact with institutions holding power, and ultimately bring about desired changes.

For HIV prevention, and public health more generally, this can be manifest as community organization for facilitating desired changes in health and social conditions, either by individuals or through environmental and policy means. Relative to **communities'** health, though, the question must also be asked, "Whose desired changes?" The answer to this may range from the community's, to local professionals to state or federal agencies with an agenda (and, usually, resources) for certain changes. Community residents may not always identify the same problems as the other two groups do, or their priorities for their time, energy, and resources may differ. This may be, ultimately, a moral question. Implicit in many discussions about the political role of communities is the idea that government agencies, professionals and their organizations, and philanthropic groups must ask themselves,

"How much do I trust the community's residents to understand the problems facing them and to be able to work with us to derive solutions that will work in the interpersonal, social, and cultural milieu of the community?"

Even in areas experiencing urban decay and social disorganization, communities contain their own unique strengths in the form of human, social, and physical resources. Many interventions have grappled with different equations for negotiating community involvement, gaining community input, getting community buy-in, and generally sharing power with the community. The literature contains stories of more and less success in these endeavors.

IV. Definitions of Community-level Interventions

When conducting a literature search for *community-level* interventions and measures, we uncovered a wide variety of usages of the term. As is the case with the concept of “community,” “community-level” also appears to mean very different things to different people.

The primary emphasis in this review will be on the goals of the intervention and the measures that correspond to those goals. The provider-related issues to community-level interventions and variables that are likely to be of interest are those that focus on community-wide involvement of an array of providers. These issues raise some important points about the composition and philosophy of various types of interventions.

Community-wide interventions. There is a sometimes difficult distinction to make between *community-level* and *community-wide*. Community-wide may be the more inclusive term, as it generally refers to the intended reach of the intervention and the breadth of activities designed to obtain that reach. Both the focus on populations and the use of multiple providers capture much of this connotation. For instance, Beery (1996) provides this definition of community-level interventions which begins with an emphasis on its intended reach:

Programs aimed at entire populations, which are usually geographically-defined, and they attempt to change health behavior through mass media campaigns, activation of existing community organizations, or changes in the physical or sociocultural environment.

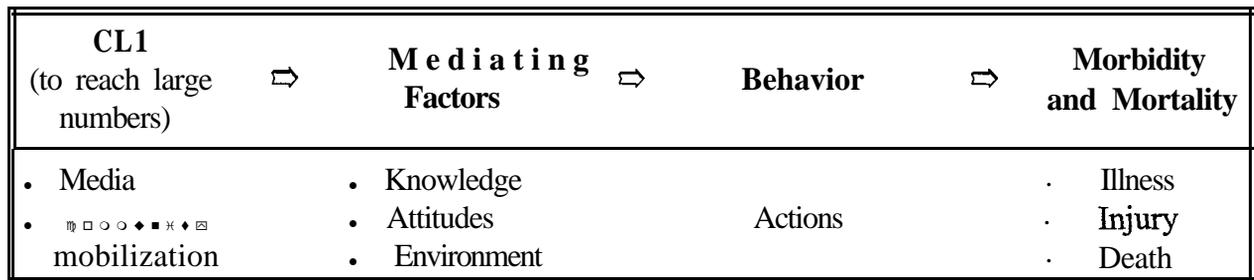
Peterson, Hawkins, and Catalano (1992) describe community-wide interventions as multi-component interventions that works in concert across domains to reduce risk. Such interventions incorporate multiple intervention components such as community mobilization, community-wide education through the media, school-based interventions, and skill training for health care professionals and community members. Furthermore, they contend that community-level

School health. Neill & Allensworth (1994) describe a multi-component school health community-level intervention in the form of a school health program. To improve the health of children, their CLI sought to integrate school and community programs which involve parents, peers, community members, and local businesses. The eight components they targeted included

- school environment
- school counseling
- school health education
- school health services
- school food service programs
- physical education
- school worksite health promotion
- integrated school & community programs

interventions “..must address and coordinate multiple risk factors across multiple domains-individual, family, school, peer group, and community”.

Coates (1990) notes that one premise of community-level is the hypothesis that an individual is more likely to initiate and maintain healthful behavior when a variety of avenues are used to inform and motivate (McKusick, Conant, & Coates, 1985). Cheadle, Wagner, and Koepsell(1992) suggest that the broad reach of community-level interventions engages changes in mediating factors in individuals and in their environment. As illustrated below, these mediators then influence individuals’ subsequent behaviors which, in turn, affect the incidence and prevalence of illness, injury, and death related to the risk behavior.



The use of community-wide components is a manifestation of one piece of the rationale for implementing community-level interventions:

To achieve a large change in a health-related behavior, it is necessary to expose many people who are exhibiting the risky behavior to both messages about and opportunities for engaging in the new behavior.

Clinical programs are limited in the numbers of people that can be reached. A community-wide approach has greater potential for reaching large numbers of people. Reach is enhanced when messages are widespread and there are numerous opportunities to be exposed to them.

Cardiovascular health promotion. Croft and colleagues offer another example of the multi-component approach to community health promotion. (Croft, Temple, Lankenau, et al, 1994). Their intervention “involved all segments of the community in an effort to create a community environment that promoted cardiovascular health and helped residents make lifestyle changes.” The providers and programs in this intervention included

- *University extension service and Medical centers* that provided blood pressure and cholesterol screenings and nutrition programs,
- *Voluntary and civic agencies, businesses, churches and other hospitals* that provided volunteers, programs, facilities, and materials in conjunction with the intervention project.
- *PSAs, talk shows, newspaper articles* that reinforced the healthful eating behavior messages being promoted
- *ShopSmart for a Healthy Heart*, a point-of-purchase program promoting label reading and providing nutrition information about healthy food in the grocery store.

Community-level structures and relationships.

Community-level generally connotes this same emphasis on reaching large groups or populations and, often, on the use of multiple components to do so. Yet, as noted in the definitions of community, use of the term *community-level* also generally underscores the consideration of macrosocial systems (e.g., economy, politics, culture), structural systems (e.g., health systems), and interpersonal relationships (e.g., social networks, cliques). (Holian, 1988). In many cases, the community interventions target changes within groups, institutions, and organizations (Iscoe & Harris, 1984). In sum, many CLIs focus on the social ecology of the community and the structures and systems that comprise it.

Cardiovascular Health. The North Karelia Project was a comprehensive community-level intervention to lower cardiovascular morbidity and mortality in a well-defined population (Vaskilampi, 1981). The activities of the program used both informal groups and informal relationships as well as traditional health care delivery systems to exercise social control. Control, according to its developers, was formed through influencing social values and norms which, according to some sociological theorists, is the only method of effecting permanent change.

In reference to smoking cessation, Thompson and her colleagues note that in community-level interventions attention is given to the broader social context within which that individual acts. They recognize that the decision to smoke “. . . takes place in a complex web of formal and informal policies and actions that reflect community norms and values.” (Thompson, Wallack, Lichtenstein, & Pechacek, 1990) . A vast number of community-level variables are derived from issues concerning these relationships and systems. These are discussed later in their own section. Another body of literature, though, emphasizes the importance of the community’s capacity to sustain itself, meet new challenges and generally enhance the quality of its residents’ lives.

Cancer Control: Programa A Su Salud was developed to encourage smoking prevention and cessation among Hispanic Americans (Ramirez, et al., 1995). The program used several forms of mass media and community networkers to deliver culturally sensitive health promotion messages in Eagle Pass, TX. All messages came from the target audience in the form of role model stories that are distributed through peer leader networks. An evaluation of the program revealed that smoking cessation rates were significantly higher in the treatment town than in the matched comparison city.

Community Empowerment, Competence, and Development. Several related areas comprise this aspect of community-level interventions — empowerment (Fawcett, 1995; Israel, 1985; Schultz, Israel, Zimmerman, & Checkoway, 1995; Wallerstein & Sanchez-Me&i, 1994), community competence (Eng & Parker, 1994; Goepfinger & Baglioni, 1985; Goepfinger, Lassiter, & Wilcox, 1982; Smith, 1994), and community development (Chavis & Wandersman, 1990; Cummings & Glaser, 1985; Florin & Wandersman, 1984).

The common feature among these areas is that they emphasize the importance of a community’s ability to determine and reach its own goals, primarily through the resources residing or located within it:

- Human capital** Resources embodied in the skills and knowledge acquired by an individual (carpentry skills, accounting ability, diplomacy)
- Physical capital** Wholly tangible resources, embodied in observable material form (e.g., money, buildings, durable goods)
- Social capital** the relationships among adults such as social networks which provide an informal structure upon which formal citizen participation can be built (e.g., arrays of friendships, work acquaintances, involvements in civic and voluntary associations)

Community empowerment models derive, in part, from individual conceptions of efficacy, agency, and individual empowerment. Plough and Olafson (1994) contend that empowerment operates on three levels:

- Personal** Individuals develop feelings of personal power
- Interpersonal** Individuals focus on skill development such as problem solving or assertiveness training
- Political** People focus on action and social change

They suggest that *empowerment* is the sense of efficacy that occurs when people realize they can solve the problems they face and have the right to contest unjust conditions. Paraphrasing Rappaport (1987) and Zimmerman and Rappaport (1988), a more specific definition of empowerment may be a “mechanism by which people, organizations and communities gain mastery over their own affairs and democratic participation in the life of their community.” Wallerstein (1992) further stipulates the targets of community mastery by suggesting that empowerment “promotes participation of people, organizations, and communities towards the goals of *increased individual and community control, political efficacy, improved quality of life, and social justice*” [emphasis added]. Israel (1985), in turn, suggests that a community level intervention is a “method of enhancing a community’s capacity to achieve its primary goals such as empowerment, community competence and stressor reduction.”

Peterson and her colleagues described community empowerment as communities identifying risk and protective factors important in their community and choosing the specific program elements they will implement within each of the domains (Peterson, Hawkins, & Catalano, 1992). This aspect of empowerment addresses many of the same issues as the next concept, community competence.

Community competence. Similarly, the concept of *community competence* describes the capacity of a community to “assess and generate the conditions required to demand or execute change” (Eng & Parker, 1994). It is also concerned with the viability of local resources, particularly the ability of community residents and groups to come together for instrumental purposes. Cottrell contends that the competent community is one whose various parts are able to:

- Collaborate effectively in **identifying the problems and needs** of a community
- Achieve a **working consensus on goals and priorities**
- Agree on ways and means to **implement the agreed-upon goal**
- **Collaborate effectively** in the required actions

The perspective on community competence shared by Chavis (1995) and Iscoe (1974) emphasizes a community's ability to acquire and mobilize resources. In this context, the competent community is one that utilizes, develops, or otherwise obtains resources (including human resources) in the community to manage change. These resources can include

- increased resources for prevention and community development
- recruitment and use of volunteers and other nonmonetary resources
- fund-raising strategies, structures, and resources
- knowledge and skills

Iscoe (1974) asserts that community competence emerges as a product of negotiation with an external power structure for control over, provision, and use of resources. Barbarin (1981) and others (e.g., Hurley, Barbarin, & Mitchell, 1981) have suggested that effective negotiation is characterized by 1) a match between problem-solving preferences of an individual and the resources provided by the system, 2) feedback between the two parties which allows for adjustment by either side, and 3) the availability of advocacy or participatory processes.

Collaborative efforts like coalitions enhance the power base of the community to negotiate externally by providing a formal advocacy structure. They also can enhance or activate the capacity of local leaders, organizations, and community institutions in individual communities to mobilize resources to prevent social and health problems and promote improved conditions.

Several studies have demonstrated the utility of the empowerment concept (see for example, Guitierrez, 1989; Chesler & Chesney, 1988; Kieffer, 1984). Yet, there also caveats to the use of the concepts and goals of empowerment. Some authors have addressed the need to distinguish between perceived control and empowerment (Schulz, Israel, Zimmerman, & Checkoway, 1995). According to these authors, perceived control does not assess actual change in material conditions, status, systems due to participation or influence in decisions or the development of a critical consciousness regarding the political nature of social conditions. In contrast, empowerment entails "actual control [by community members] over their own lives and democratic participation in the life of their community" (Zimmerman & Rappaport, 1988). Chavis and Wandersman (1990) also argue that empowerment is context specific-a person or community may feel empowered in one setting but not another or they may be able to bring resources to bear in one situation but not another. If empowerment does, in fact, require negotiation with institutions holding power, then it is easy to imagine a community with differential results with various agencies.

Riger (1993) has also postulated that empowered communities—those in which individuals and organizations apply their skills and resources in collective efforts that lead to community competence—may in fact lose the very conditions that foster a sense of community. Riger suggests that community may exist most cohesively when people experience a shared external fate (e.g., a terrorist attack or natural disaster) or a condition of poverty or oppression. Thus, in an empowered community, alienation and a sense of separateness may result from the absence of crisis or stress, or from access to sufficient resources to cope by oneself.

One manifestation of empowerment is in the development of collaborative coalitions of residents. The underlying goals of empowerment with concrete outcomes is reflected in the history of work in community development and community action.

Community development and community action. Community development has been defined as the “voluntary cooperation and self help/mutual aid efforts among residents of a particular locale which aim to improve the physical, social and economic conditions of a community” (Florin & Wandersman, 1990). Its focus is holistic, seeking to improving human, economic and environmental resources (Chavis & Wandersman, 1990).

Central to the ideal of community development are self-help, the active participation of local residents, individuals assuming more control of their health, and community control (WHO, 1986). One of the primary factors that has been found to be associated with participation is *sense of community* (Chavis & Wandersman, 1990; Bachrach & Zatura, 1985). Sense of community can serve as a catalyst for local action, like participation in a block association. This concept also serves as bridge back to the previous discussion of empowerment, sense of community contributes to individual and group empowerment as it helps neighbors act collectively for neighborhood development and to address shared concerns.

During the 1970s, two types of programs were promoted for increasing the participation of low income populations in community development. *Community Action Agencies* were community-based organizations specializing in delivery of social services or development of human resources. Their goals included empowering the poor, increasing the share of resources from the federal government to community organizations, and increasing services from the city (e.g., expansion of medical care or police protection through specialized organizations controlled by residents). The second set of programs were *community development corporations* that attempted to generate capital, keep it local, increase the supply of jobs and business opportunities in the local community, and generally strengthen the political base of the poor. Both types of programs sought to. Cummings and Glaser (1985) found that for the two shared goals—1) mobilizing local support and enthusiasm for program development and 2) implementing and increasing quality of life by increasing control over neighborhood institutions and organizations—there was no difference between community action agencies and community development corporations.

One manifestation of the community development model of community-level intervention is *social action*-the redistribution of resources and extend community control to the oppressed, disadvantaged and marginalized. Popularized by Alinsky (1962, 1971) and many who followed him (Marquez, 1990; McKnight & Kretzmann, 1984), social action relies on experienced community organizers and conflict tactics achieve this redistribution. Social action is sometimes distinguished from locality development, in that the latter emphasizes a “bottom up” orientation to involve citizens in setting goals and taking action via use of indigenous leadership as opposed to experienced community organizers (Fawcett, 1984). Social action adherents draw an important distinction between *issues* and *problems*. Issues are concerns that can be adequately addressed and remedied via pressure group tactics, while problems reflect structure and processes beyond immediate influence of political groups (Fawcett, 1984). For example, “world hunger” is a problem, whereas redistribution of unused food from local restaurants to the poor or homeless is an issue.

A study by Marquez (1990) used “Alinsky-style” organizing to empower the residents of Mexican-American barrios in Texas to create lasting economic and political change. This included detailed research on community concerns (necessary for identifying issues around which to emotionally involve and organize the community), development of umbrella organizations, “in-your-face” demonstrations, involvement of local churches, and use of full-time professional organizers. Community residents were urged to think about their problems and identify specific solutions as a precursor to getting them directly involved with public life. The changes they realized included large amounts of capital improvement funds, housing, new jobs, legislative changes in education funding, and environmental protections for the barrio area.

McKnight and Kretzmann (1984) note that the decline in urban areas of neighborhood organizations (such as unions and civic associations) and visible “targets” for social action (i.e. local factories or banking institutions) has a distinct impact on the effectiveness of organizing for broad-based change. Thus, community organizers must come up with creative ways to rebuild the economic, political and social infrastructure of communities as a precursor to organizing them.

Community-level Interventions in HIV Prevention

Community-level issues have been addressed in a number of interventions and broader programs. In 1990, Bye made a plea for more focus on community-level issues and their corresponding intervention techniques. He suggested that in the period preceding his article, interventionists had viewed change solely in individualistic terms. More specifically, they had failed to note the critical social nature of risk behaviors:

“What [people engaging in HIV risk behaviors] perceive to be socially acceptable within these groups has an impact on their attitudes and behavior. As perceptions about norms change, behavior often changes as well” (Bye, 1990).

Bye and other major figures in the development of HIV prevention models in San Francisco (Coates, 1990; Coates & Greenblatt, 1990; McKusick, Conant, & Coates, 1985) have heavily promoted the use of peers and influential members of social networks to modify these norms. They have also

endorsed the use of print and broadcast media to reach large portions of the population with information about HIV transmission and prevention. Coates (1990) described the “San Francisco Model” as a multifaceted community-level HIV risk reduction program. He attributes the shift in community norms observed among gay and bisexual men in San Francisco to the interventions implemented in this program; furthermore, he believes that the behavioral changes observed were a function of this normative shift. The model entailed the simultaneous delivery of HIV prevention interventions to individuals, groups, and the entire community through a number of channels. Table 2 (found on the next page) below contains the various channels mobilized.

Yet, despite these efforts, Shaw has suggested that community change refers to “changes within the group as well as changes between the group and the external social or political structure in which it exists” (Shaw, 1988). However, most common HIV prevention efforts for women, *are ‘community based’* in the sense that they operate from a community location or use community culture or structure”. Even those that are described *as ‘community controlled’* do not necessarily reflect the needs and interests of all members of the community. Women—especially women with or at risk for HIV — are often excluded from planning and managing these prevention and service programs.” This situation has been alleviated to different degrees in different jurisdictions by HIV Prevention Community Planning which mandates the involvement of infected, affected, and provider community representatives.

According to Guydish and Sanstad (1992), HIV prevention programs that wish to encourage participation from existing organizations and local community members in economically disadvantaged communities must align themselves with efforts to fight the larger inequities such as crime, immigration, housing and child care, that also afflict these communities. However, these authors view these issues as structural in nature and as a platform for gaining support for the health promotion goal, HIV prevention.

Several HIV Prevention efforts have strategically utilized the power of community social networks to promote changes in community norms and behaviors. Johnson, Ostrow, and Joseph (1990) conducted group education among established social networks, capitalizing on the norm setting

power of opinion leaders. They mobilized opinion leaders to promote the desired behaviors and to spread the message that “change is taking place.”

Kelly et al., (1994b) also described a **community** level intervention with gay men in four American cities with a population less than 25,000. The interventions are conducted at gay bars for a **3-night** period. Bartenders were asked to identify key opinion leaders who were then recruited to attend a **five** week group session to learn information and skills necessary to sensitize their friends to the risk of HIV.

Sweat and Dennison (1995) describe a number of structural and environmental approaches to HIV prevention. Two examples reflect the gist of these approaches. Bathhouse closings in San Francisco had at least two hypothetical effects—they removed an environmental cue or opportunity for unsafe sex, and sent a signal that social acceptability for unprotected sex for homosexual men was no longer the accepted norm. The “100%” program in Thailand provided legal sanctions and a monitoring mechanism for ensuring the use of condoms. This program required all commercial sex workers to use condoms with all clients and required brothel owners to assist in this effort. Condom use was monitored in brothels (in part, by testing for gonorrhea, and graduated sanctions were imposed against brothel owners for noncompliance.

Community Level Interventions at the CDC

The AIDS Community Demonstration Projects (CDC, 1996; O’Reilly & Higgins, 1992) utilized the broad reach and normative influence of community peers to reach large numbers of community residents with behavioral risk factors for HIV (e.g., unsafe syringe use, trading sex for money, being the female sex partner of an injection drug user). Peers served as role models in **community-**developed print material that was widely distributed and discussed by other peers whose presence and discussion embodied and modeled the community norm of safer behaviors.

The Prevention of HIV in Women and Infants Demonstration Projects (Person & Cotton, 1996) built on the model developed and tested in the ACDP. The WIDP projects sought to increase the both the community-wide reach of the intervention and to create a community-pervasive presence of prevention messages and normative influences. Besides tailored print media using peer role models, peer distribution and social reinforcement, WIDP grantees also implemented stage-tailored paraprofessional outreach tailored to individual’s stage of readiness to use condoms consistently. The grantees also engaged an extensive mobilization of multiple sectors of community for an integrated HIV prevention effort. These sectors included family and social networks; business, social, and religious organizations; community-based HIV prevention and other health and social service agencies; and governmental health and human services agencies.

E. Community Level Variables

I. Nature of the variables reviewed

In this second half of the literature review, we outline a wide range of community-level variables that have been used in other arenas. These variables have been used for a variety of purposes. For instance, some variables describe conditions or situations that may not be amenable to change through the intervention at hand, but that do describe the community context in which the interventions have occurred. These variables might affect the likelihood of the intervention being successfully implemented or its efficacy in bringing about the desired changes. Other variables relate to community-level issues that are believed to be related to (either correlated with or causal to) a given outcome like youth crime or HIV transmission or prevention. In some cases, the community-level variables have actually been developed, tested, and employed as measures of outcome in an intervention or naturally-occurring situation.

Where available, we describe variables that were used either as constructs in theoretical models or measured through observation, instrumentation or intervention, or document review. Other variables that we discuss here are inferred from discussions in the literature about the nature or structure of communities; community-level interventions; or relationships among individuals or groups who share proximity, identity, or purpose. Thus, these variables will have varying degrees of psychometric examination, use as measurement tools, and demonstrated practical utility.

This review of variables begins with a general discussion of organizing schema for community-level variables that have been proposed in the literature, primarily by Sweat and Dennison (1995) and Cheadle and colleagues (Cheadle, Wagner, Koepsell, Kristal, et al., 1992). These models helped structure our thinking about the meaningful differences between types of variables and their measurement implications. Next we consider the community-level variables themselves.

We have organized these variables in the following way. First, we discuss the structural and environmental aspects of the community (e.g., urban density, population size, crime rates). These seem to reflect the less personal side of community-level variability, as contrasted with the ensuing sections. Around these core structural and environmental components are the interpersonal networks and issues of the individual's relationships to and sense of her culture, neighborhood, and community. Once interpersonal relationships and general orientation to the community are established, the next perspective is that of deliberate community organization for goals of general community improvement or promotion of specific aspects of health or social well-being. This final piece deals with variables associated with community competence, empowerment, and community development.

II. Relationship between variables at different levels

Differences between individual and community-level variables. Traditionally, individual-level variables have been accepted at face value, and accorded a primary role in the measurement of health promotion outcomes. However, Sampson (1992) points out that his study shows that there is a contextual source for the race-violence link. More generally, there is reason to believe that individual attributes (like racial variation in communities) is embedded in greatly differing community structural characteristics (e.g., level of social organization or social capital). Thus, there has been a call for analysis which takes into account the community context, that is, to study individual-level variations in social behavior as a function of both individual and community-level factors.

Beyond the individual there are still multiple levels, many of which might be invoked by the term “community.” According to Sweat and Dennison (1995), these levels include *environmental*, *structural*, and *superstructural*. Examples of these levels and typical mechanisms that might be employed to effect changes at that level are shown in Table 3 on the following page. Superstructural variables include the arrangement of large social groups, oppression of certain groups or distinct power differences that result in unequal advantages, and sector-wide conditions (like lack of transportation or declining agricultural economy). The structural level, on the other hand, describes the organization and management of institutions and jurisdictional domains within society. For example, laws and policies would be categorized as structural aspects of community. The third level, environmental aspects, include the more immediate features of community with which individuals come into contact. The living conditions of a particular group would fall into the environmental level, as would the resources and opportunities available to them for economic sustenance, leisure, social interaction, and other aspects of community life.

This categorization of community-level factors focuses on the potential causal factors affecting health and social conditions (in their case, HIV risk and prevention). This organizing scheme provides one means of ordering issues to consider the relationship between the critical variables to be addressed and the types of activities that might affect them. In addition, one can infer many types of descriptive and instrumental variables from this scheme.

Table 3 Superstructural, Structural, and Environmental Influences (from Sweat and Dennison, 1996)

Causal Level	Definition	Examples	Potential Change Mechanisms
Superstructural	<ul style="list-style-type: none"> . Macrosocial and political arrangements . Resources and power differences that result in unequal advantages 	<ul style="list-style-type: none"> . Economic underdevelopment . Declining agricultural economy . Poverty . Sexism . Homophobia . Western domination . imperialism 	<ul style="list-style-type: none"> . National and international social movements . Revolution . Land redistribution . War . Empowerment of disenfranchised populations
Structural	<ul style="list-style-type: none"> . Laws . Policies . Standard Operating Procedures 	<ul style="list-style-type: none"> . Unregulated commercial sex . Bachelor wage system . No family housing required at worksite . Lack of human rights laws . No financial support for social services 	<ul style="list-style-type: none"> . Legislative lobbying . Civil and human rights activism . Boycotts . Constitutional and legal reform . Voting . Political pressure . Structural adjustment policies by international donors
Environmental	<ul style="list-style-type: none"> . Individual living conditions . Resources and opportunities . Recognition of individual, structural, and superstructural factors 	<ul style="list-style-type: none"> . Work camps with many single men and few women . Few condoms . High prevalence of HIV/STD . Family far away . Few job opportunities . Few social services . Failing agricultural economy . Industrialization and urbanization 	<ul style="list-style-type: none"> . Community organization . Provision of social services . Legal action . Unionization . Enforcement of laws

Community-level units of analysis. Furthermore, when community-level features are the units of intervention for health promotion activities, the unit of analysis must also be the community. There are at least two types of community units, differing in their size and, therefore, the precision with which measurements from them reflect particular community groups. At the more inclusive level, there are cities, counties, or metropolitan statistical areas (MSAs). These are large, highly aggregated, and heterogeneous units with politically-defined (and hence artificial) ecological boundaries. Much standard data is collected at these levels and is readily available for analysis. At the other end of the spectrum are intra-urban units-census tracts, wards, block groups, neighborhoods. Sampson (1992) suggests that while these are imperfect proxies for the concept of local community, they do possess more ecological integrity (e.g., natural boundaries, social homogeneity). Choice of these units must be made with consideration to the trade-offs among these factors.

Cheadle and his colleagues (Cheadle, Wagner, Koepsell, & Kristol, 1992) offer another organizing framework based on the concept of “community-level variables.” They contend that *community-level* is really comprised of at least three categories of variables. The first category is *individual-level* measures that are aggregated, but for which there is other information available for each individual. With such information, analyses can be conducted in which the community-level sample is disaggregated with relevant covariates. Standard community-wide surveys conducted for particular projects (like those conducted in the CDC-funded community-level intervention demonstrations) are prime examples of this category. The second category also consists of individual-level data that has been aggregated, but, in this case, it cannot be disaggregated with reference to other values known about each individual. Traffic accident statistics or AIDS mortality data would be typical of this category. Cheadle and his colleagues refer to the third category of variables as *environmental*. These variables address the physical, legal, social, and economic environment in a community that reflect and likely influence attitudes and behavior of individual community members. More examples of these categories, including HIV prevention-relevant examples, can be found in Table 4 on the next page.

These organizing schema offered by Sweat and Dennison (1995) and Cheadle, et al., (1992) provide some useful notions for exploring the range of community-level variables that are available. These frameworks attune us both to the relationship between causal processes at the community level and to meaningful distinctions among types of measures that are all accurately described as “community-level.” These distinctions are noted, where relevant, throughout the following discussion. We also believe that, for the purpose of this review, that there is also a set of functional relationships among the variables found in our search. Thus, our discussion follows the logic of

- Core structural and environmental aspects of the community
- Interpersonal networks, culture, and sense of neighborhood and community
- Community organization and participation [involvement]

Table 4. Three categories of community-level variables (from Cheadle, Wagner, Koepsell, Kristal, et al.,1992)

Community-level Category	Description	Example of variables	HIV Prevention Examples
STATISTICAL AGGREGATES			
Individual-level measures: disaggregated	Measurements from individuals about whom other information is known	<ul style="list-style-type: none"> • Survey data with covariates collected 	<ul style="list-style-type: none"> • Community surveys (e.g., KABB) • YRBS • BRFSSS
Individual-level measures: aggregated	Measurements from individuals which cannot be disaggregated or analyzed relative to covariates (below the census tract or similar level)	<ul style="list-style-type: none"> • Census data • Mortality rates • Traffic accident statistics • Most economic data (e.g., sales information) 	<ul style="list-style-type: none"> • Mortality (AIDS-related deaths) • Morbidity (AIDS prevalence; HIV incidence) • Condom sales
ENVIRONMENTAL INDICATORS			
Environmental indicators	Physical, legal, social, and economic environment in a community that reflect and likely influence attitudes and behavior of individual community members	<ul style="list-style-type: none"> • Number, type, visibility of no-smoking signs • Graffiti • Restaurant menu review for nutritional program 	<ul style="list-style-type: none"> • Empty condom wrappers • Placement and amount of space allocated for condoms • Availability and price of condoms • Exchanged syringes • Used bleach kits • No. of HIV prevention billboards, PSAs, print material, local news articles • History of HIV legislation • Workplace prevention and discrimination policies • HIV prevention resources (\$, staff, volunteers) extant in community

Core structural and environmental aspects of the community

At the core of the community are structural characteristics and environmental conditions that form a foundation on which social behavior occurs. These include some social issues, like culture and norms, and other nonsocial issues like educational attainment, residential mobility, or economics. These nonsocial factors sometimes do have social antecedents or ramifications, but they are not inherently social in nature.

Following the discussion of these core features and the means of measuring them, we will examine the interpersonal connections that occur in the context of these features and particular measures associated with the interpersonal aspects. In addition, we will review the relationship between these socially networked connections on a group's sense of being a "neighborhood" or "community" and residents' attachment to their community.

Guiding principles of social interaction: Culture, norms, laws, and policies

Every society, be it large or small, has a set of rules indicating how individuals should behave. Many of these rules are implicit, or at least unspoken, such as rules about how close we should stand to others during conversations with them. Others are more formal, like traffic regulations or written guidelines concerning appropriate activities in the workplace. Whether formal or informal, these rules have consequences that may involve interpersonal sanctions (anger, rejection, or praise), economics (e.g., fines, bonuses, or being fired from a job), or physical (corporal punishment, sexual pleasure, or confinement). Sometimes, these guidelines address behaviors that may result in illness or injury to self or to others. It is in this context that we consider the role of cultural, normative, legal, and policy variables on behaviors like HIV prevention.

Culture and norms. Social scientists have long pointed to the impact of culture and norms on behavior and community activity. Plog and Bates (1976) suggest that *culture* is

a system of meanings that people create by modifying and rearranging strategies they inherit from the past to solve immediate problems they encounter when interacting with people and the environment. (p. 10).

Goldschmidt (1971) also points out the role of *cultural values-the* community's shared (but often unspoken) beliefs regarding distinctions between right and wrong, good and bad, and moral and immoral. Like other tools, cultural practices, ideas, and values can be brought to bear in a given

Culture and Norms

Social norms regarding

- sexual debut
- particular sexual behaviors
- frequency of sexual activity
- communication about sex
- condom and other contraceptive use
- sexually transmitted disease
- pregnancy
- having children

Ethnic heterogeneity (and the associated cultural heterogeneity)

Activities that model community norms

Perceptions of community (peer) norms

Presence of subcultures (of violence, of drug use, of unsafe needle/sex behaviors)

situation, or discarded if they seem to lose their utility. Related to these ideas is *normative influence*, a term used to describe people's tendency to conform to the positive expectations of significant others in their lives.

Johnson, Ostrow, and Joseph (1990) discuss the role of cultural differences in HIV prevention. They note that sex roles and other norms influence communication and assertiveness in sexual relationships, in frequency and nature of sexual activity, and in age at sexual initiation. Clearly, understanding a community's cultural milieu around these issues would be critical in fielding an intervention to address sexual behavior or the communication about it. Other authors have noted similar roles of culture and norms related to contraceptive behavior (Zelms, Kantner, & Ford (1981)). However, in a project to mobilize communities around smoking cessation, community traditions did not relate significantly to the desired outcomes (Thompson, Corbett, Bracht, & Pechacek, 1993).

Sampson (1992) also discusses the cultural dimensions of social problems, specifically youth violence and crime. He maintains that cultural disorganization—“attenuation of societal cultural values” (p.70)—is related to increased likelihood of youth violence in a community. He suggests that residential mobility, lack of economic opportunities, and ethnic heterogeneity impede communication of and obstruct the quest for common values, thereby fostering cultural diversity with respect to nondelinquent values. These structural factors lead to *disorganized communities* (the community context) which spawn subcultures with their own ecologically-structured norms and expectations in response to this cultural vacuum. In some cases, (e.g., gangs, injection drug networks), the norms and culture of these derived subcultures condone, tolerate, or less than fervently condemn behaviors that are dangerous to self, others, or society (e.g., community tolerance of drug use by pregnant women).

Norms. Hawkins and Catalano (1992) describe a concrete manifestation of a community norm in the form of a “Drug Watch,” similar to neighborhood crime watches, in which community residents work closely with law enforcement to identify and report illegal drug activity.’ “*Neighborhood reclamation* of parks or housing developments, including all-night vigils to keep drug dealers out of their areas also provide an opportunity to model desired community norms.

Coates (1990) also note that perceptions of normative behavior—what an individual *believes* that others are doing—affects his or her motivation to engage in a desired behavior. One primary means of altering perceptions of norms is to alter the standards and norms are for healthier alternatives that community residents actually hold (Coates, 1990)

Laws and policies. Besides the informal influence brought to bear through culture and norms, formal laws, policies, and similar explicit guidelines reflect a community's values and beliefs. Such guidelines can be brought to bear on health-related behaviors at the community-level, as was evidenced by the requirement for installation of *seatbelt* restraints in all American automobiles and the laws requiring their use. Other examples of this variety are the taxation of cigarettes to reduce their economic viability to individuals (or, at least, to increase the perceived disadvantage of smoking them) and the restrictions on alcohol advertising, and the requirement that all foods be labeled for their nutritional content.

Hawkins and Catalano (1992) describe several environmental and policy barriers to drug and alcohol abuse. These included drug-free zones, school board decisions (e.g., on curriculum choice), consequences for drug use at school, zoning and planning laws that prohibit sale of alcoholic beverages in areas frequented by high-risk youth, happy hour restrictions, and restrictions on days and hours of sales (including distribution at public events).

Relative to HIV prevention, Sweat and Dennison (1995) remind us of the brothel licensing in Thailand and the closing of bathhouses in San Francisco that were frequented by gay men. Efforts to decriminalize the possession of syringes and other injection paraphernalia also falls under the umbrella of issues. Community businesses may also have policies concerning discrimination or education that contributes to the normative structure of the community. Each of these represents specific laws, policies, or other explicit guidance that could be considered as variables for consideration in assessing a community's HIV prevention structure.

Community Structure

The expression of and adherence to culture and norms are greatly affected by the structure of the community in terms of population characteristics, level of urbanization, and residential stability of the community's residents.

Population characteristics and community types. Various authors have postulated about the relationships between population size and various social and health conditions and the successful implementation of various community-level interventions. Holian (1988), for instance, reviewed the relationship between population size and a number of community-level variables in terms of their relationship to infant mortality in the developing regions of Mexico. His analysis determined that these other more specific community characteristics-for example, type of utilities present, availability of sanitation technology, access to schools and medical facilities⁴⁰ not appear to affect infant survival independently of population size. He concluded that "community size serves as a summary measure of a locality's overall level of development and comparative risk of early death for its young inhabitants."

It is unclear, though, what the generalizability is from this study of a more rural population (most of the areas studied had limited sewage, were remotely located relative to schools and medical facilities, etc.) and communities within the United States. While U.S. cities or neighborhoods may vary in the degree of economic opportunity, for example, or level of urban decay, they do tend to have access to (or, at least, proximity to) basic utilities, transportation, and medical and other health care facilities. However, Thompson, Corbett, Bracht, and Pechacek (1993) also determined that community size was not associated

Laws and Policies	
Laws regarding	<ul style="list-style-type: none"> • prostitution • discrimination • drug use or possession of injection drug paraphernalia • Placing others at risk through HIV exposure
School board decisions	
Policies concerning	<ul style="list-style-type: none"> • discrimination • HIV/AIDS education • workplace safety

with the successful implementation of the COMMIT projects, which involved broad-based community mobilization to increase the pressure for smoking cessation or prevention.

The studies discussed above examined population size as an absolute quantity. Others have considered the density of people residing in a bounded geographic area. The traditional hypothesis is that greater density is positively associated with severe pathologies such as psychological and social illness, aggression, crime, intra-group violence. Choldin (1978) states that the connection has failed to be proven within urban areas. This author believes that the combination of urban spatial analysis and ecological theories has led to an ecological fallacy.

The nature of this measurement illogic is that where aggregated rates for individual-level phenomena are identified as pathology, they are assumed to be factual representations of pathology which is often subjectively defined. For instance, high receipt of AFDC was used as an indicator of poor parental performance rather than merely as a proxy for economic disadvantage. Density is generally considered to be simply the number of social units per unit of space. However, operationalizations of the concept must take into account the nature of that space. For instance, the meaning of the density value may be quite different if the space considered in the denominator is land outdoors (such as a city or neighborhood) or indoors (for example, an apartment building or household).

However, Sweat and Dennison (1995) note that in sub-Saharan Africa population density may be one factor augmenting the risk for HIV infection. They suggest that the increased population density leading resulting from migration from agricultural to urban areas has led to greater social and physical proximity that has facilitated the rapid spread of HIV. Other factors (noted below) are also believed to be instrumental in this result.

Urbanization. Related to population characteristics and density is the issues of urbanization (the level of urban development) and heterogeneity of community residents. In terms of urbanization's relationship to HIV risk and prevention, Sweat and Dennison (1995) argue that in sub-Saharan Africa several factors converge to augment the risky conditions found there. Besides the relationship of density to proximity noted above, urbanization (and the concomitant climatic and economic collapse of traditionally agricultural areas) has led to a migration of people from traditional societies to urban areas. Many of these migrant workers have little knowledge of AIDS and are thrust into environments with fewer social control mechanisms than they are used to. This situation is militated by likely changes in their perception of responsibility to their community and family.

Population Characteristics and Community Types
City size
Community size
Population size
Population density
Urban density
Community type
• small agricultural
• independent urban
• metropolitan

In their model of social disorganization (as it relates to youth delinquency) Sampson and Groves (1989) highlight both urbanization and heterogeneity. They created a scale of urbanism, ranging from rural to suburban to inner-city, as well as a measure of inner city location (1=central-city, 0=all other locations). A scale of heterogeneity was constructed that takes into account both the relative size and number of groups in the population with a score of one reflecting maximum heterogeneity.

They found that, as expected, urbanization was negatively associated with the density of friendship networks and positively associated with the inability of a community to control its youth.

However, as with population size, Thompson and her colleagues found that urbanization did not relate to the ability to support a community's efforts to mobilize providers for smoking cessation (Thompson, Corbett, Bracht, & Pechacek, 1993). This last finding, though, does not address the issue of urbanization's effect on other community issues like mobilization of the general citizenry and informal community groups or the development of policies.

Florin and Wandersman (1984) examined the relationship between *urban decay* and neighborhood participation. The variables they used to assess urban decay included 1) decreasing property values, 2) increasing crime rate, and 3) general deterioration of the physical environment. They found a negative relationship between these variables and community satisfaction, but no significant relationship between those variables and crime.

Earlier in this section, we described the relationship that Holian (1988) found between population size and a number of more specific aspects of community structure. Despite his conclusion that populations size was an ample proxy in his study of rural Mexico, the variables that he assessed may provide an interesting starting point for considering relevant issues for domestic HIV prevention activities.

Urbanization

Urban Decay

- decreasing property values
- increasing crime rates
- general physical deterioration of the physical environment

Community type

- rural/agricultural
- suburban
- inner-city

Holian's dimensions of urbanization

Access to other areas

- Distance to nearest urban center of 20,000 or more residents
- Distance to the principal regional market in the area
- Method of transport (motor vehicle, animal, foot)
- Primary means of communication (telephone, telegraph, post office)

Utilities

- Proportion of households with electricity
- Proportion of households with potable (piped) water or sewage systems

Medical facilities

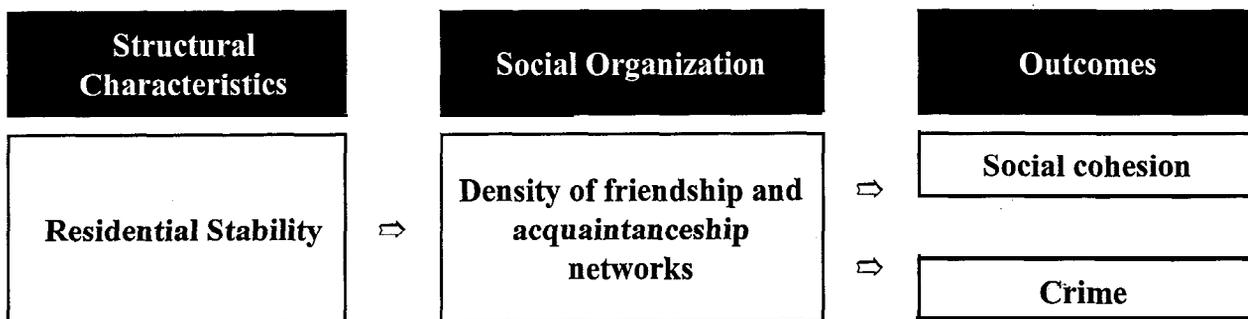
- Distance to closest pharmacy
- Distance to closest paramedical service
- Distance to closest doctor
- Distance to closest clinic
- Distance to closest hospital

Schools

- Distance to nearest secondary or preparatory school
- Distance to nearest university

Holian proposes a multidimensional construction of urbanization, comprised of general access to developed jurisdictions and the means of that access, presence of municipal utilities, availability of a variety of medical services or practitioners, and access to secondary schools. The first variable, access, is a measure of proximity to the general economic and social amenities of more highly urbanized areas (and may itself be a proxy for the other variables, especially access-as opposed to distance to-medical services). The other constructs are each indicative of general economic development of an area, but also have a more direct impact on health and well-being. Available utilities relates directly to ease of maintaining hygienic conditions (washing, potable water, sewage handling). Availability of medical services reflects a community's ability to diagnose and treat illness. Access to institutions of higher learning has been associated with greater knowledge about health, hygiene, and diet (Holian, 1988). The text box to the left shows these.

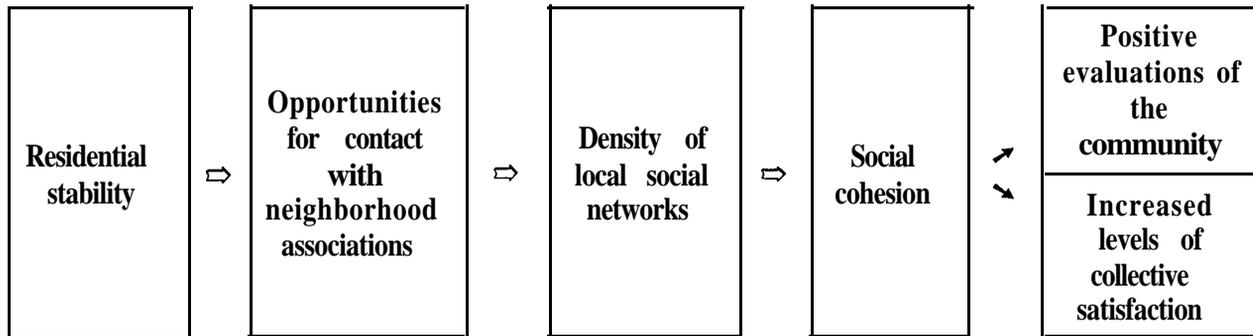
Residential mobility. Putnam (1996) suggested that residential mobility “. . .like frequent re-potting of plants, tends to disrupt root systems, and it takes time for an uprooted individual to lay down new roots.” His metaphor is based on studies of mobility and instability stemming from early in this century. Shaw and McKay (1988) postulated a relationship between a community's residents living in the same place (or at least the same neighborhood) for an extended period of time and the likelihood of crime in that neighborhood. The following diagram depicts their proposed relationship:



Later authors such as Kasarda and Janowitz (1974) have also suggested a greater generalization-that length of residence is the key exogenous factor that influences attitudes and behaviors toward the community. They contend that the residential instability, when present in a community, serves as a major structural impediment to community-level organization.

In their discussion of social disorganization, Sampson and Groves (1989) also include high residential turnover as a critical factor in the equation yielding adverse social behaviors like crime. Their hypothesis expands on the relationships proposed by Shaw and McKay (1988). They propose that residential turnover or instability increases institutional instability, thus, leaving individuals with fewer opportunities for contact in neighborhood organization or associations. These diminished opportunities, in turn, reduce the chances and motivation to form local friendships (one aspect of social capital). The hypothesized chain of results stemming from the lack of social cohesion (through formation of local friendships) is reduced individual satisfaction with the community, reduced attachment to the community, and the subsequent reduced motivation to act cooperatively on behalf of that community. They found that residential turnover, measured by both length of

residence and residential stability (Osofsky, 1990) were associated with increased levels of collective satisfaction, independent of urbanization and other social factors such as age composition or social class of the community. These relationships are shown in the diagram below.



Residential Mobility

Length of Residence (*Instability factor derived from Census data*)

- Proportion of the households who have lived in their current home for less than 10 years
- Proportion of residents that have moved to or from a different house within the last 5 years
- Percent of households that have lived in their current home for less than 1 year

Number of places lived in during given time period

Intended length of residence

Rate of population turnover

Percentage of residents brought up in the area within 15 minutes walk from their current home

Home ownership

Fragmentation between one's place of work and one's place of business

Population loss

- Forced migration (e.g., urban renewal)
- Refugee migrations (e.g., war or famine)
- Economic migration (e.g., job availability in urban areas)

This hypothesis was supported by their data, but they did call for further research to develop measurement strategies for community-level concepts rather than relying on individual levels and speculating about the community representativeness and generalizability of the data. In fact, despite his earlier eloquent metaphor, Putnam (1996) later analyzed more data related to social connectedness (measured by social trust and association membership) and found no support for the residential mobility hypothesis.

With respect to child maltreatment, residential instability was found to have a weak effect in the expected direction (Coulton, Korbin, Su, & Chow, 1995). However, there was an interesting interaction between instability and impoverishment. These authors found that the effect of instability falls as impoverishment rises, that is, instability is more associated with higher rates of child maltreatment in areas that are less impoverished.

There are other sources of mobility as well, such as forced migration (Devereux, 1991; Sweat & Dennison, 1995; Wallace & Wallace, 1990) and population loss due to urban decay or urban renewal (Wallace and Wallace, 1990). Sampson (1991) also describes another type of residential instability. This type of instability

is a result of the fragmentation between one's place of work and one's place of business. When individuals spend a significant, part of their week outside of their own neighborhood, they are also less likely to form a strong attachment to it than if they were engaged in multiple life tasks there.

Economics. There are many aspects of economics that might describe a community, affect its ability to implement health-enhancing activities, influence health and social conditions, or be modified by a community-level intervention. These include macroeconomic factors that affect large segments of the population. Many authors, for instance, relate the effect of economic crises in sub-Saharan Africa to the migrations and rapidly changing social conditions there that have contributed to the rapid spread of HIV and AIDS there (Barnett & Blaikie, 1992; Becker, 1990; Hanson, 1992; Sanders & Sambo, 1991; Sweat and Dennison, 1995).

Becker (1990) hypothesizes the interface between the social and economic factors as they existed (and continue to, to some degree) in parts of Africa. Economic factors, including changing climactic and market forces on local agriculture, have spurred a migration of many men from smaller, agriculture-based communities to the larger cities. This has taken the form of jobs located in the urban area *per se* and in trucking along routes criss-crossing the country; both of these situations requires many married men to be separated from their wives and families for extended periods of time. For both married and single men, there is a separation from the society and its norms that helped form the parameters under which their interpersonal and social behaviors occurred.

Simultaneously, limited economic opportunities for women in more rural areas has encouraged their migration to cities.

Economic opportunities were also limited in the cities, resulting in many women establishing means of financial support through prostitution or multiple relationships with men. In many of these relationships, sex seems to be the primary feature. The convergence of men being away from their wives for extended periods, limited traditional social sanctions on pre- or extramarital sex, and the wide availability of women interested in having sex for money or support has resulted in large populations with multiple partners, and high turnover among those partners. Thus, one ramification of the economic conditions prevalent in many parts of Africa is an increase in men's and women's risk for HIV infection.

**Economic Aspects of HIV/AIDS
Prevention and Treatment**

Cumulative costs of HIV prevention programming

Cumulative costs of AIDS treatment

Loss in labor productivity

Indirect costs

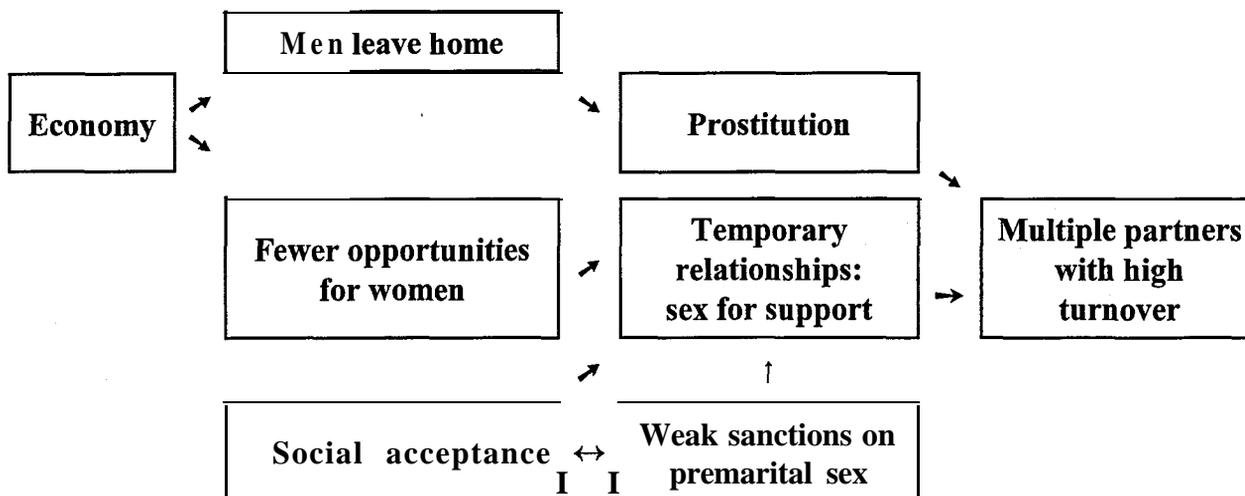
- Foregone leisure
- Psychic costs of death and illness
- Psychic and leisure costs imposed on victim's friends and relatives

Increased share of resources from Federal government

Increased services from city

Increased public/private sector investment and technical assistance

Availability of sex partners (market for relationships)



Lasker, Egolf and Wolf (1994) offer an example from the U.S. of the impact of economic conditions on health. The article describes why the town of Roseta, PA, experienced a dramatic increase in coronary heart disease during the decade between 1965 and 1974. Prior to 1965, the population, comprised mainly of Italian immigrants, had abnormally low rates of cardiovascular problems. They also had relatively low educational and social status, which the authors relate to limited exposure to the stress of better-paying jobs and the stressful influences of mainstream society. As the younger generation aged, they had less social protective factors (they interacted more with mainstream society, gained more education, worked better paying jobs, encountered similar stresses as mainstream society). Thus, commensurate with the improvement in their economic and educational attainment, the generation aging in to risk for heart problems between 1965 and 1974 began to experience similar rates of coronary disease as others in the state and throughout the U.S.

Holian (1988) describes economic status as the community's level of material well-being and ability to sustain its members. He measured this factor in Mexico by assessing the predominant economic activity (for instance, the percentage of the labor force engaged in agricultural activities) and the mean daily wage of community residents. Another indicator of economic status found in the literature is the percentage of students receiving subsidized lunches (e.g., Rienzo and Button, 1993); similarly, Peterson and her colleagues used the proportion of 5th grade students eligible for the free lunch program as one variable on which they matched neighborhoods in their design of a community-level intervention (Peterson, Hawkins, & Catalano, 1992).

The Roseta example described above is something of an anomaly in the literature reviewed here, as most studies have found economic deprivation to be more highly associated with health and social problems. In each of school-lunch examples, for instance, economic status was measured in terms of the negative pole of the "status" continuum: as *poverty* or as economic *deprivation*. Similarly, *economic worries* was described by Thompson and her associates as a barrier to the community organization for the COMMIT project (Thompson, Wallack, Lichtenstein, & Pechacek, 1991). These authors do not, however, operationalize the variable. As an example of the effects on a health outcome, Coulton, Korbin, Su, and Chow (1995) found that *impoverishment* (as measured by variables from the U.S. Census and found in the text box on the next page) had the greatest effect on child maltreatment rates.

Economic Factors

Community's per capita income

Mean wage (daily wage)

Predominant economic activity

- Percent of labor force engaged in agricultural, industrial, service, or professional activities

Economic inequity among segments of community

Impoverishment (Factor derived from Census data)

- poverty rate
- unemployment rate
- vacant housing
- population loss
- percent black population
- female headed households

Economic Deprivation

- Percent of students receiving subsidized lunches
- Proportion of 5th grade students eligible for the free lunch program
- Proportion of community receiving welfare or public assistance
- Educational attainment (a measure of investment in future opportunities)

Economic Worries

Job type X Stress Interaction

Likewise, in a study of neighborhood influences on premarital behaviors of adolescent men, the most consistent neighborhood predictor of pregnancy and fatherhood was an economic one: the unemployment rate (Ku, Sonenstein, & Pleck, 1993). These researchers interpretation of these findings was that greater financial resources at the personal level may enable teenage males to attract more partners and, therefore, may heighten their risk of impregnating someone. Simultaneously, limited economic opportunities at the community level may also heighten the risks of paternity by making males with resources even more attractive to females with few other means of material support (and the emotional aspects of caring, love, and general support that some adolescents associate with material support).

An interesting measurement question was also addressed in this study. The authors suggest that when community-level variables are used in contextual analysis, there has been little effort to assess the correspondence of measures of the same issues at a personal level. Thus, in their study, they developed corresponding community-level and individual-level

measures for each aspect addressed (as shown in the following table). The results of this study were not overwhelmingly strong relative to this methodological issue. The authors concluded that there is independence between the community-level and individual-level variables. Including the effects of an individual-level variable did not modify the effects of the community-level variable and *vice versa*. However, this article does raise the important issue of carefully hypothesizing about multi-level influences, choosing variables deliberately and carefully, and interpreting the findings judiciously.

Table 5. Corresponding community- and Individual-level measures of economic opportunity (from Ku, Sonenstein, & Pleck, 1993)

Economic Opportunities		
Category	Community	Individual
Employment opportunities	Census tract unemployment rate	<ul style="list-style-type: none"> • Whether the teenager had worked in the past 12 months • If so, the percent time worked
Welfare receipt	Proportion of families who receive public assistance	measure of whether or not person receives assistance
Overall Economic Milieu	Neighborhood poverty	Family income
Education*	Proportion of high-school dropouts	How far behind someone is in school
Availability of female partners**	Ratio of teenage girls to boys	[No personal equivalent]

Characterized in economic terms as investment in future opportunities

** Relative to economic *opportunity*, it appears that the authors have included this factor as an indicator of the *market for relationships*

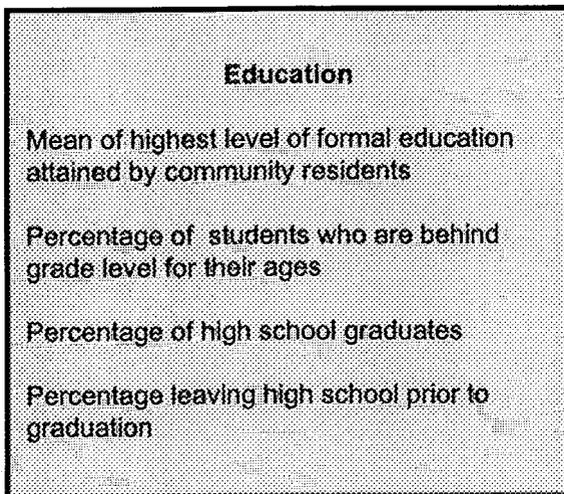
Another aspect of economics concerns the community's ability to acquire necessary resources to meet its needs for health and social well-being. This ability might be manifest in an increase in the share of resources obtained from Federal or state sources for infrastructure development, capacity building, or program implementation. Another potential indicator of **augmented** resources is receiving increased services from the local municipal bodies (i.e. city or county); increased police protection, responsiveness to housing needs, or availability of HIV prevention activities are examples of such services. Finally, the accumulation of new or additional private sector investment in jobs, health-related activities, and general community improvement are also potentially viable measures of community resource acquisition.

Finally, there are economic implications of HIV and AIDS manifest as both direct and indirect costs of morbidity and mortality. Loss in labor productivity is a direct cost to communities that can have significant impact in areas hardest hit by AIDS (Becker, 1990; Hanson, 1992). Many parts of Africa have been devastated by the drastic shortage of workers due to AIDS-related illnesses. Similarly, there are indirect costs of HIV and AIDS to people with these conditions, their families, and **friends**. Foregone leisure is one such indirect cost to those with HIV and AIDS, as are the (harder to quantify) psychic costs of death and illness. There are also psychic and leisure costs imposed on the friends and relatives of people with AIDS.

As with any economic analysis, these costs-or the values placed on them by the analyst-must be viewed in terms of the perspective that guides the analysis. For instance, viewed **from** the perspective of an infected individual, foregone leisure might be viewed as a critical loss, whereas it may hold a lower valence **from** a society's perspective.

Education. While often measured, education is often employed more as a sample descriptor or covariate than as an instrumental variable. This is true, primarily, when the educational measure is attainment or last year of formal education. However, Putnam (1996) found that education is strongly associated with civic engagement. Using data from the General Social Survey, he determined that people with 14 to 18 years of total education have approximately twice as many memberships as people with only twelve years of formal education. In addition, 75% of those with this higher level of education believed that "most people can be trusted" as opposed to only 42% of those with only 12 years of education. However, there has been a decline of about 20% in both measures at all educational levels.

Another common aspect of education used in many studies is academic performance or failure. It has been used both as a descriptor of communities (e.g., Thompson, Corbett, **Bracht, & Pechacek**, 1993) and as an explanatory variable for a variety of outcomes. In a study of the psychosocial predictors of substance abuse among black adolescent males, **Maton** and Zimmerman (1996) found that leaving high school was a significant predictor of marijuana and hard drug usage. This suggested to these authors that interventions to keep or re-enroll black adolescent males in school can be important aspects of multicomponent approaches to minimizing adolescent drug use.



Most commonly, school performance is measured by aggregating data collected from individuals, one type of community-level variable (Cheadle, et al., 1992). Furthermore, these aggregated data are then used in analyses related to outcomes for those same individuals. Considering, the study described above which used both individual- and community-level measures of educational attainment (Ku, Sonnenstein, & Pleck, 1993), they found that the community-level measure (*an environmental indicator* in Cheadle's taxonomy) did not independently influence any of the outcomes measured, while individuals' attainment was significantly associated with contraceptive use and ever getting someone pregnant.

We suggested that interpersonal and civic behavior occurs in the context of structural characteristics and environmental conditions extant in the community. These included culture and norms, laws and policies, community and population characteristics, residential mobility, urbanization, education, and economics. We also noted that these factors often have social antecedents or ramifications. We now turn to community residents' attachment to their community and one another. In this next

section, we review the interpersonal connections that occur in the context of these features and particular measures associated with them. We also review measures associated with the aspects of social trust, sense of community, and related topics.

TRUST AND COHESION

This section describes variables in the literature that attempt to operationalize a community's perception of itself, its internal well-being, or its psychological properties, stability, or cohesiveness. People's feelings about their community, others in the community, and those outside of the community are believed to be potential determinants of civic engagement and, more generally, of a community's likelihood to successfully meet its needs. This logic suggests that a group of people first must come together and develop relationships before they can feel like a community, much less a viable one. Once they have developed a sense of cohesiveness, a community can begin to consider the other aspects of organization and mobilization strategies to improve health and social conditions.

Social Networks

As defined previously, a community is made up of individuals and groups of people who are often united by kinship and common purpose, as well as by geography. Within communities, however, there exist smaller entities of friends, families, and groups of like-minded people, such that every community is comprised of a complex web of clustered groups. Israel (1985) illustrates this concept of *social networks*, which are "a specific set of linkages among a defined set of persons, with the additional property that the characteristics of those linkages as a whole can be used to interpret the social behavior of the people involved."

Researchers have developed a number of variables to identify social networks, or the degree to which people within a community are connected. Sampson (1991) measured the extent of community networks with the variable *density of local friendship and acquaintanceship ties* which is the proportion of residents who reported that *most* of the people in the area were either friends or acquaintances (internal reliability coefficient = 0.55). The construct *neighborhood anonymity* served as a secondary measure of the extent to which people in a community know one another and was determined with the item, "How difficult is it for you to tell a stranger in your neighborhood from someone who lives here?" (internal reliability coefficient = 0.65)

Social Networks

Density of Social Networks

- Proportion of residents who report that most of the people in the area are either friends or acquaintances
- Proportion of friends and acquaintances in the immediate vicinity of their home
- Number of intergenerational ties within a network
- Proportion of other community members to whom there are affective and instrumental relationships

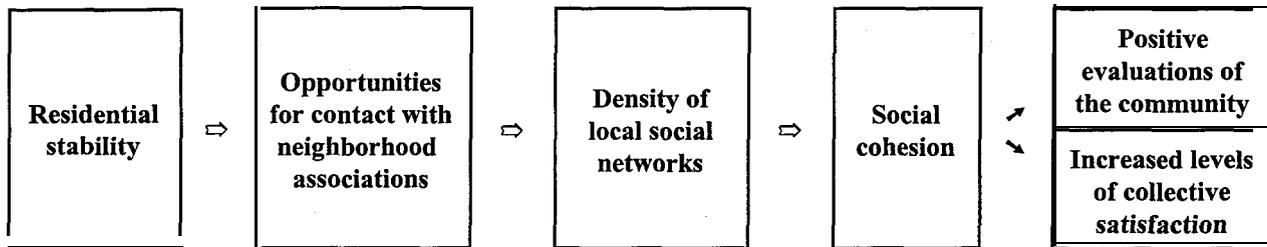
Neighborhood Anonymity

- Difficulty distinguishing local residents from strangers

Social Cohesion

- Extent to which people do things together and try to help each other

Because systems of social networks are developed and sustained over time, structural factors, such as residential mobility, may fray existing networks and while at the same time impede the growth of new ones (Israel, 1985). However, Sampson (1991) found supporting evidence that the density of local acquaintanceship mediates the effect of structural variations in residential stability on social cohesion and leads to more positive evaluations of the community and, as a result, increased levels of collective satisfaction, independent of urbanization and other social factors (e.g., age composition, social class).



In addition, his study suggests that both length of residence and community residential stability increase an individual’s friendship and acquaintanceship ties, which in turn increase attachment to community (discussed further with variables measuring the *sense of community*). This study is one of few that has considered the effects of network variables on both the individual and the community.

Some researchers have found that strong bonds to family is a protective factor in youth drug use (Peterson, Hawkins, & Catalano, 1992). Similarly, communities with strong bonds within and among families are likely to manifest healthier social and health conditions. Certainly, community networks are strengthened by having family-, or kin-bonds, but even more specifically, they are strengthened by having a high degree of intergenerational relationships. In other words, the connections between different layers of generations in one family to other families intensifies the linkages in networks (Sampson, 1991). The figure below depicts these relationships between multiple generations of the same pairs of families.

Family A	has relationship with	Family B
Grandparents	↔	Grandparents
3		↓↑
Parents	↔	Parents
↓↑		↓↑
Children	↔	Children

Cross-generational networks are generally more dense, providing greater normative and instrumental influence over their members. Furthermore, networks comprised of teachers, local religious and recreational leaders, businesses that serve youth, the police, and others-as well as family members and friends-are also more influential than those with more singular ties among members.

Social networks have been the focus of many HIV studies, especially with respect to diffusion theory to reduce risk behavior (earing, Meyer, & Rogers, 1994). In short, diffusion theorists conceptualize that innovations are communicated through certain channels over time among the members of a social system. An innovation is an idea, practice, or object that is perceived as new by an individual. HIV spreads in much the same way, through an interconnected set of individuals who are linked through interpersonal relationships (Rogers & Kincaid, 1981).

Diffusion of Innovations

Channels for explicit diffusion of health-related messages, norms, and skills (e.g., natural helpers, community health workers, peer networkers)

Size and rate of innovation and early adoption of health-related messages, norms, and skills

Evidence of health-related messages, norms, and skills in groups peripheral to primary audience for intervention (i.e. an unexposed group)

Extent of weak network ties that might promote shared information and norms

To illustrate, Klovdahl (1985), found that 40 gay men among the first to be diagnosed with AIDS in the United States who resided in Los Angeles and Orange County, San Francisco, New York, and other cities, formed a social network. The social and sexual relationships among these 40 persons determined the initial pathways of the epidemic in this country. However, as diffusion theory suggests, existing social networks can also be utilized for the promotion of prevention innovations.

One area related to diffusion innovation theory that has received a great deal of attention in the community-level intervention literature the use of community members as health promoters, outreach workers, lay health advisors, etc. Eng

and Parker note that every community has natural helpers or “‘catalysts for self-reliance,’ embodied in part in a group of persons known to their neighbors to be reliable sources of social support and stewardship.” It is important to make the distinction here between natural *helpers*, as defined above, and those persons merely trained to perform a task in the community on behalf of a research team. CDC demonstration projects that have utilized existing relationships within social networks refer to natural helpers as “peer networkers” (CDC, 1995) and indigenous “outreach specialists” (Cotton & Person, 1996).

In addition to friends, family, and natural helpers in the community, research demonstrates that individuals utilize peripheral “bridge” members of their networks to seek cognitive and instrumental support. Granovetter (1973) found that when job searching, people tend to seek out help not from close friends or co-workers, but from peripheral acquaintances. These “weak” ties are perceived as bridges from one network to others, which may be brimming with new employment information and opportunity.

Social Support. The role of social support has been studied primarily as a coping resource to stressful life events ranging from individual level stressors (e.g., divorce, bereavement) to community wide events (e.g., unemployment, disaster). Israel (1985) describes three types of social support: instrumental, cognitive, and affective. *Instrumental support* is the provision of tangible services and assistance, while *cognitive support* refers to new and diverse information shared among network members, and *affective support* connotes the provision of moral support, caring, and love.

Previous reviews of the literature (Cohen & Wills, 1985; Kessler & McLeod, 1985; Sarason, Sarason & Pierce (1994); Schwarzer & Leppin, 1991) have generally concluded that social support is beneficial to psychological as well as physical health. However, many studies have failed to measure the association between the stressor and social support, perhaps with the assumption that there is no relation between the two, when in fact, there are numerous examples of stressful events changing the availability and quality of social ties (e.g., Eckenrode & Wethington, 1991). For instance, Jerusalem and colleagues (Jerusalem, Kaniasty, Lehman, Ritter, & Turnball, 1995) propose that any gains in coping resources, manifested in temporarily elevated communal cohesion and mobilization of received social support that follow disasters and other community level events, are overwhelmed by an accelerated cycle of losses, or deterioration. Thus, while it may seem that crises or shared problems may be necessary to bring communities together, there may, in fact, be a non-linear relationship between the severity of the situation and the support that can be expected from other community members.

Social Support

Extent of social support within networks:

- **Instrumental:** Provision of tangible services and assistance among network members
- **Cognitive:** New and diverse information shared among network members
- **Affective:** Provision of moral support, caring, and love

Feelings of “Community”

Community Satisfaction. Several researchers have developed measures of individuals’ measure of community satisfaction. Sampson (1991) refers to his variable as *collective satisfaction* (as mentioned previously), which is defined as the extent of respondents’ satisfaction with the local community on a four point scale (internal reliability coefficient = 0.78). Related to this construct is *neighborhood satisfaction*, which has been found to differ among Caucasians and African Americans (Spain, 1987). To summarize, Spain concluded that African-Americans may be less likely to perceive their environment or neighborhood as negative because, in his study, they expressed lower expectations about their living conditions and amenities. They also demonstrated different motivations for moving into suburban or downtown areas than did Caucasians. African-Americans reported that they moved to become a part of “suburban life,” while Caucasians frequently reported moving to urban areas with the intention of “fixing up” the location. More specific areas of neighborhood satisfaction have recently been examined. Coulton, Korbin, Su, and Chow (1995) utilized a rating of neighborhood as good or bad place to raise children, finding that those neighborhoods rated as “poor” experienced a higher rate of child maltreatment.

Sense of Community

Satisfaction with the local community

Expectations about living conditions and desired characteristics of neighborhood

Belief that community is a good place to raise children

Perceived similarity to others in community

Positive relations with other community members

Presence of "street life"

Interdependence manifest by giving to or doing for others what one expects from them

Perception of being part of a larger dependable and stable structure

Attachment to others based on

- where they work
- where they go to school
- group affiliations

Feelings of belongingness

Belief that one can influence and are influenced by the referent group

Belief that needs are met by the collective capabilities of the group

Emotional connectedness to the group

Presence of groups in which members share

- **Mission:** values and goals that transcend individual participants
- **Connection:** acceptance by members of an ongoing group
- **Reciprocal responsibility:** members are seen as valuable resources to a setting, and the setting responds to the need of individuals

Sense of Community. Durkheim (195 1) documented that suicide was linked to the relationship between the individual and his or her community before the turn of the century [1897]. Over fifty years of research that followed has shown that the strength of a sense of community can prevent or contribute to mental illness, suicide, and child abuse (Paris and Dunham, 1939; Garbarino & Sherman, 1980; Unger & Powell, 1980). Sense of community has also been linked to physical improvements of neighborhoods, crime prevention, and to problem-oriented coping strategies in response to environmental threats (Ahlbrandt & Cunningham, 1979; Bachrach & Zautra, 1985; Greenberg, Rohe, & Williams, 1982). Sarason (1974) who is perhaps the best known researcher in this area, defines his *psychological sense of community* (PSC) construct as, "...the perception of similarity to others, an acknowledged interdependence by giving to or doing for others what one expects from them, the feeling that one is part of a larger dependable and stable structure" (p. 157).

In a study of intention to vote for higher taxes to support public schools, Davidson and Cotter (1993) define psychological sense of community as "a strong attachment people may experience towards others based on where they work, go to school or group affiliations." They cite McMillan and Chavis (1986), who provide four characteristics that are associated with high PSC: 1) feelings of belongingness, 2) belief that one can influence and is influenced by the referent group, 3) belief that needs are met by the collective capabilities of the group, and 4) emotional connectedness to the group.

Guided by these factors, Davidson and Cotter developed a 17 item PSC scale, which included items such as: "I feel like I belong here," "When I travel I am proud to tell others where I live," and "It would take a lot for me to move

away from this city.” Their findings revealed that school-related beliefs were the strongest predictor of intention to vote and suggested that the impact of PSC on voting intention is mediated by the pressing issues under consideration.

Research undertaken by Jason and Kobayashi (1995) builds on our understanding of the PSC construct by providing examples of groups that have independently formed alternative living communities as a result of their particular needs. In each of these cohesive units, members share a common mission, connection, and reciprocal responsibility. *Mission* refers to values and goals that transcend individual participants. *Connection* leads to the belief that one is accepted by members of an ongoing group, while *reciprocal responsibility* connotes members being seen as valuable resources to a setting, and at the same time, the setting responding to the need of individuals. Jason and Kobayashi (1995) suggest that the totality of these factors yields a psychological sense of community, or, “an awareness of the relationships and accepting the risks, pain, and weakness encountered in self and others.”

In their study of “block control” and locus of control as predictors of local action, Chavis and Wandersman (1990) created the variable, *sense of community score*, composed of the interaction between the value of a sense of community to an individual and the actual feeling of a sense of a community. A number of factors were defined as intervening variables, including 1) neighboring relations, 2) sense of personal power to influence block conditions, 3) sense of group’s power over the block, 4) evaluation of block qualities, and 5) satisfaction with the block. They concluded that

[in] a neighborhood environment , a sense of community can be both a cause and effect of local action. People feel more secure with their neighbors when they have a sense of community. They are more likely to feel comfortable coming to their first meeting of an association and because of regular communication among neighbors, they are more likely to hear about it.

Florin and Wandersman (1984) in a study of cognitive and behavioral factors that influence participation in block organizations developed a five factor scale (discussed in greater detail later in this review) which contained several items related to attachment, satisfaction, and sense of community. These factors included the following items related to neighborhood satisfaction:

Some people care a lot about the of block they live on. For others, the block is not important. How important is what your block is like to you?

Do you feel a sense of community with other people on this block? Do you share interests with them?

More recently, Plas and Lewis (1996) conducted a study of sense of community in a Gulf Shore town, Seaside, Florida, using a qualitative research design. The researchers cite McMillan and Chavis' concept of "people making the place" and hypothesized that the inverse effect could be at work, such that "the place makes the people." Members of the community were asked to share perceptions of the strengths and weaknesses of Seaside, and responses were coded into nine categories (urban design, architecture, town philosophy, membership, influence, need fulfillment, shared emotional connection, other variables possibly relevant to sense of community, and variables clearly unrelated to sense of community). The researchers suggest that their results reveal that people hold the environmental factors responsible for their sense of community.

Trust. Intuitively, it seems that along with differing levels of a psychological sense of community, community's may vary in their feelings of trust, both toward one another within a community, and externally, toward outside organizations and agencies which affect the community's quality of life. As Chavis and Wandersman suggest (see quote above), community members are more secure (and perhaps more trusting) with high levels of sense of community. Putnam (1995) suggests that Americans are far less trusting than we used to be. Because trust is a core component of theory of social capital, it is essential to have behavioral indicators of social trust. However, in his search for measures, Putnam found only one, a single item on a national questionnaire that has been replicated for over thirty years:

Trust

Extent of general trust in "others"

Extent of trust in other members of community

Extent of trust in local organizations

Extent of trust in governmental organizations

Extent of trust in academic professionals or of local or regional academic institution

Ability of adults to distinguish neighborhood youth from strangers

Whether or not local parents ignore open misbehavior of youths in community.

Presence of groups in which members share

- Mission: values and goals that transcend individual participants
- Connection: acceptance by members of an ongoing group
- Reciprocal responsibility: members are seen as valuable resources to a setting, and the setting responds to the need of individuals

"Some say that most people can be trusted, while others say that you can't be too careful in dealing with people. Which do you believe?"

A trend analysis on this item reveals that social trust has eroded significantly' 'during the past three decades.

On a smaller scale, Furstenberg (1990) identified two variables which measure levels of trust among neighbors. The first factor is cognitive -- the ability of adults to distinguish neighborhood youth **from** strangers, and the second is behavioral -- whether or not local parents ignore open misbehavior of youths in community.

Sense of responsibility to community. Perhaps parallel to levels of trust felt among members neighbors in a community is the degree to which the community feels responsible for what occurs within its boundaries. In the community organizing literature of the early 1980's, this

feeling was sometimes referred to as *ownership*, which means that community members have a sense of responsibility for and control over programs promoting change, so that they will continue to be supportive after the initial organizing period (Kahn, 1982; Kettner, Daley, & Nichols, 1985; Rothman, 1979). More recently, researchers have added another dimension to ownership with the term *community-based intimacy* wherein the insiders, or community residents, are protective of the community, including people, environment, and secrets, from outsiders (Russel, Gregory, Wotton, Mordock, & Counts, 1996).

In a study concerned with block level measures of informal social control, Taylor (1984) determined that three factors are related to lower rates of violence in communities. The first is *social ties*, or the proportion of respondents who belonged to an organization to which co-residents also belonged. The second factor is *near home responsibilities* and refers to the extent to which respondents feel responsible for what happened in areas surrounding their home. *Neighborhood identification*, the third factor, is defined as the proportion of residents who were able to provide a name for their neighborhood, tapping into a community identity construct. Similarly, researchers have used successfully used measures of *neighborhood unity and attachment* along with *strong commitment to schools* in a study predicting outcomes of a school-based comprehensive drug prevention program (Peterson, Hawkins, & Catalano, 1992).

Sense of Responsibility to Community

Social ties

- the proportion of respondents who belonged to an organization to which co-residents also belonged.

Near home responsibilities

- extent to which respondents feel responsible for what happened in areas surrounding their home.

Neighborhood identification

- proportion of residents who were able to provide a name for their neighborhood

Neighborhood unity and attachment

Strong commitment to schools

Extent to which neighbors

- take note of and question strangers in their community
- watch over other's property
- assume responsibility for [the supervision of youth activities]
- intervene in local disturbances

Other researchers have examined behaviors of neighbors which are indicative of a responsibility to the surrounding community. Sampson and his colleagues (years) measured the degree to which neighbors take note of and question strangers in their community, watch over other's property, assume responsibility for the supervision of youth activities, and intervene in local disturbances.

Community Independence. A less direct measure of sense of community could be the degree to which members utilize services and businesses in the vicinity rather than leaving the neighborhood. This construct has been alternately labeled community independence, community solidarity, self-sufficient communities, and self-contained communities. Thompson (1993) discusses the impact of self-contained communities, in which a high proportion of people obtain necessary services and goods locally. Within this theme, McAllister and O'Shea (1981) explore community independence in an oral health promotion context.

Community Cohesion and Social Organization

Community social organization refers generally to patterns and functions of formal and informal networks and institutions and organizations in a locale (Coulton, Korbin, Su, and Chow (1995); Kasarda and Janowitz, 1974). More specifically, organized communities will exhibit high levels of **social cohesion**, which is reflected in perceptions of *helping/caring functions*, *control of deviance*, *guardianship*, *mutual trust*, and *socialization of the young* (Sampson, 1991).

Israel (1985) measured social cohesion with items such as, "In some neighborhoods, people do things together and try to help each other while in other areas, people mostly go their own way. In general, what kind of neighborhood would you say you live? ($Alpha = .64$)" Another researcher (Buckner, 1988) asked questions that more directly assess the perception of cohesion with this type of item: "I believe my neighbors would help me in an emergency."

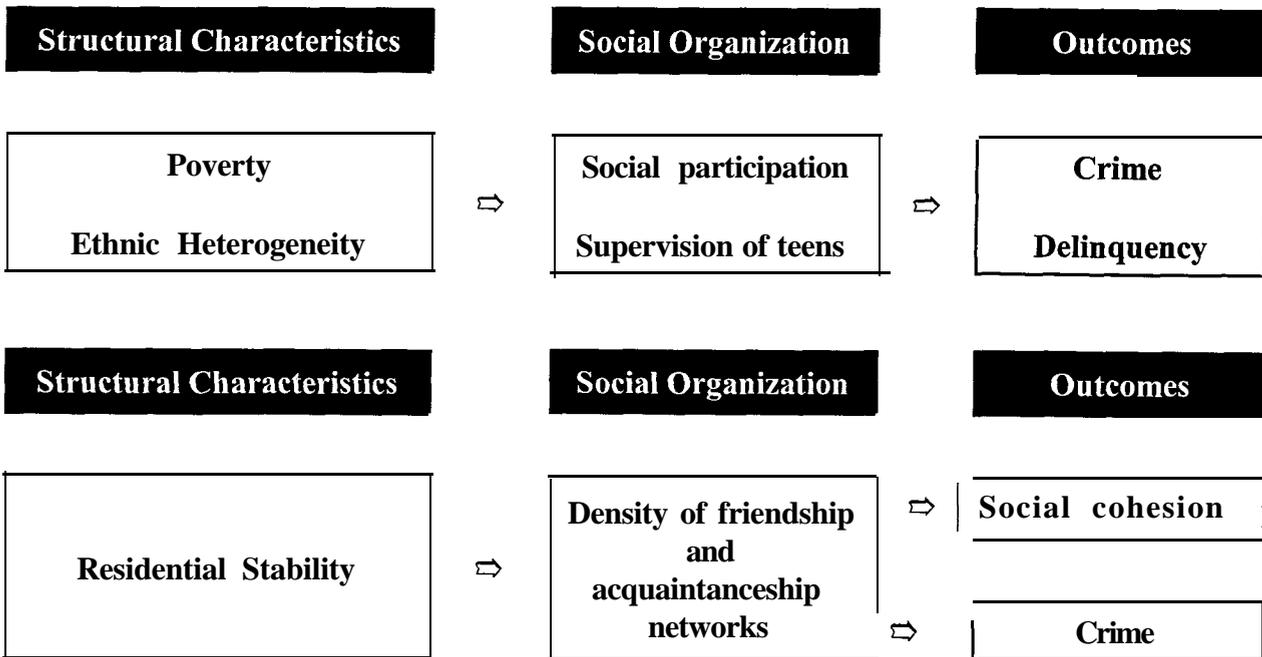
Social Cohesion
Helping/caring functions (Sampson, 1991) <ul style="list-style-type: none">• Control of deviance• Guardianship• Mutual trust• Socialization of the young
Existence of mutual assistance in neighborhood <ul style="list-style-type: none">• "In some neighborhoods, people do things together and try to help each other while in other areas, people mostly go their own way. In general, what kind of neighborhood would you say you live?"• "I believe my neighbors would help me in an emergency." factors found in cohesive communities work against deviance: the ability to guide the behavior of others toward prosocial norms, the density of local friendship networks, and high levels of local participation in organizations.
Characteristics of cohesive communities <ul style="list-style-type: none">• Ability to guide the behavior of others toward prosocial norms• Density of local friendship networks• High levels of local participation in organizations

Organized, cohesive communities been found to demonstrate these perceived behaviors, as well. Sampson (1992) stated that organized communities are more successful at the supervision and control of teenage groups, especially gangs. Several researchers concerned with delinquency control (Coulton, Korbin, Su, & Chow, 1995; Sampson and Groves, 1989) suggest that three factors found in cohesive communities work against deviance: the ability to guide the behavior of others toward prosocial norms, the density of local friendship networks, and high levels of local participation in organizations.

In their studies, residents of cohesive communities were better able to control teen behaviors that set the context for gang-related crime. Supervision of leisure-time activities, intervention in street-corner congregations, and challenging youth who appeared to be "up to no good" are three tactics used to combat delinquency. Furthermore, in communities with dense friendship and acquaintanceship networks, the likelihood that strangers would be noticed is greater, which then logically leads to greater protective behavior against

victimization. Finally, Sampson and Groves (1989) highlight the importance of community organizations by pointing out that the instability and isolation of community institutions are key structural determinants of social disorganization (Kornhauser, 1978).

Coleman (1990) attempts to add structural factors to the relationship between social organization and delinquency.



Social Disorganization

Conditions of social incivility

- loitering youths or homeless people
- rowdy behavior
- drug dealing
- public drunkenness
- prostitution

Conditions of physical incivility

- litter
- vandalism
- vacant and/or dilapidated housing
- abandoned cars
- unkempt lots

Residential mobility

Family disruption

- Percentage of single parent homes
- Divorce rates
- Rates of child abuse

From this review, it is clear that there has been far more research conducted on the *lack* of social cohesion and on the deleterious effects of social disorganization in communities. **Social disorganization** is defined as the inability of a community structure to realize the common values of its residents and maintain effective social controls (Bursik, 1984; Kornhauser, 1978). Social disorganization is manifested in community tension (Thompson, Wallack, Lichenstein, Pechacek, 1990), marginalization, stigma, isolation from families, and alienation (Sweat & Dennison, 1995).

There are several methods for measuring community-level ecological constructs. Community disorder indicators may be drawn from residents themselves, on-site observations of conditions, or reports from the local media, for example (Perkins & Taylor, 1996). Conditions of disorder or “incivility” represent a superficial neglect of the community but more importantly, they symbolize an underlying breakdown in both local norms of behavior and formal and informal

social controls (Perkins, Meeks, & Taylor, 1992; Taylor & Shumaker, 1990). Social incivilities include observable problems such as loitering youths or homeless people, rowdy behavior, drugdealing, public drunkenness, and prostitution. Physical incivilities include litter, vandalism, vacant and/or dilapidated housing, abandoned cars, and unkempt lots.

Gasch and Fullilove (1993) summarize succinctly the relationship of social disintegration to our next chapter. They state, “Communities of color are disintegrating communities that are already suffering economic and social crisis of massive proportions...Because social disintegration is the underlying cause of multiple epidemics, we propose that community building must be the central response” (Gasch and Fullilove, 1993).

Civic Involvement: Community Empowerment, Competence, and Development

We have examined the core structural aspects that characterize communities and the interpersonal connections that occur in the context of these structural features. We have also looked at the sense of neighborhood and community related, in part, to individuals’ attachment to their social networks. However, many changes that occur in communities do so because of the active participation of individuals in collaboration with others for a discrete purpose. Civic involvement is generally a deliberate action whose goal is improvement of personal, familial, or community conditions (or all three). Thus, we review the literature on civic involvement as a potential logical outgrowth or reflection of individuals’ attachment to the community.

In many types of community-level interventions, effectiveness is often determined by a community’s ability to work cooperatively to address issues it deems important. Community cooperation is both a function of the individuals’ participation in community activities and individual and organizational willingness and ability to collaborate and reach consensus, and act productively in their best interest. Thus, community involvement and its related issues are critical determinants that require their own measurements.

The importance of civic involvement is manifest in its ubiquitous presence in a variety of literatures, including those of *empowerment*, *community competence*, and *community development*. All of these bodies of literature also highlight the preexisting levels of social capital—the combination of social trust, social networks, and civic involvement—but also the community’s capacity to develop and sustain these resources. Unfortunately, the meaning of such terms as “empowerment” and “social capital” varies by discipline, resulting in an uncertainty about how to assess them at the community level. Therefore, as **Hawe** stated,

[The] task, is to devise ways to look behind the rhetoric, to tease out what the words mean in practice and clarify program values so that these concepts can be appropriately reflected in the evaluation design and approach.”

The goal of this section is to identify how various authors have operationalized the terms community competency, empowerment, civic involvement and social capital in order to improve our understanding of how these concepts may be utilized as outcome measurements in community-level planning and interventions for HIV prevention.

Community Competence

The major idea underlying community competence is that communities encompass a variety of strengths and resources that can be brought to bear on its problems or concerns. Cottrell(1976) contrasts this with deficit-based models for understanding community function or responses to problems (or the lack of response to them). Goeppinger and Baglioni (1985) stress that the term *community competence* should not be confused with personal or interpersonal competence. Instead, they contend, this term refers to the functioning of the community as a whole, not the functioning of its parts. According to Cotrell (1976), the ingredients for a competent community are multidimensional. He identified eight activities that should happen both independently and simultaneously in order for various parts of a community to work effectively in a collaborative process. These activities include

- a commitment to the well-being of the community
- participation in community life
- being aware of community values and needs
- articulating and communicating those values and needs
- dealing with conflict constructively
- making decisions and other progress within the community
- managing relationships with the larger society.

More specific variables addressed that address these dimensions are found in the table on the following page. The Appendix contains the specific items developed to address these issues by Goeppinger and Baglioni (1985) and Eng and Parker (1994).

Goeppinger and Baglioni (1985) made one of the first attempts to operationalize these concepts. These researchers began with a set of 87 items that they believed reflected these dimensions. They next refined the measures of each dimension with the aid of experts who rated the extent to which each item related to a dimension. The remaining items were then sorted into the dimension set that they most closely represented. A 22-item instrument with Likert-type scales resulted from this psychometric development. Data from the field test of this instrument were factor-analyzed, yielding four factors that accounted for about 35% of the variance. The authors characterized these factors as *democratic participation style*, *crime* (the problem focus of the survey), *resource adequacy and use*, and *decision-making interactions*.

In their efforts to evaluate if changes in community competence occurred during a health promotion program for three rural, under served African-American communities in Mississippi, Eng and Parker (1994), in conjunction with project participants, operationalized these dimensions with community participation to tailor them to the residents' specific needs, issues, and understanding of the

community. In addition, the program's reliance on "natural helpers" to serve as trained voluntary community health advisors (CHAs) necessitated the addition of social support as another dimension of community competence.

Evaluators and program staff developed an instrument consisting of 41 scale items, 12 open-ended questions with pre-coded potential response categories and 14 true open-ended questions designed to measure the revised eight dimensions and the overall level of community competence at baseline and one year later. For example, scale items for the dimension participation asked questions like, "Do people in this community stay here or go somewhere else for fun?" or "When it comes to getting things done in this community, how often do the same few people end up doing all the work?" The Cronbach scores of the relationship between the scale items and their corresponding dimension ranged between .58 and .81, indicating a relatively high degree of correlation. However, Eng and Parker warn against using the questionnaire as a standardized tool since the items were specifically developed to address the life circumstances of the three communities targeted for the intervention. Instead, they suggest, attention should be focused on replicating their process of survey design and implementation.

Eng and Parker (1994) found that the baseline scores fell into the low to middle ranges, indicating that the communities were somewhat competent prior to the health promotion program; however, there was room for improvement. The scores after one year began to converge reflecting the progress in some of the dimensions and deterioration in others. The authors attribute this finding to the difficult nature of empowerment and community development.

In Eng and Parker's view, community competency is a vehicle for community empowerment and an essential precursor to community development. However, one can also consider community empowerment and development as tools in the construction of community competence. Central to both of these theories is the importance of the relationship between empowerment and community competency.

Table 5. Community competence dimensions and measurements (from Cottrell (1976) and Goepfinger & Baglioni (1985))

Community Competence Dimensions (Cottrell)	Measured Variables (Goepfinger and Baglioni)*
Participation: Process by which a community member commits him or herself to a community and contributes to the definition of goals as well as to ways and means for their implementation.	Involvement in neighborhood associations <ul style="list-style-type: none"> • civic or social clubs • patriotic or fraternal organizations • church-related groups • political or governmental bodies
Commitment: Commitment to a community as a relationship worth enhancing and keeping.	Residential Stability Proportion of family members in community Pride in community appearance Use of local businesses and services
Self-other awareness and clarity of situational definitions: Clarity with which each part of a community can perceive its own identity and position on issues in relationship to other parts in the community.	Adequacy of services and other resources to address [issue X]
Articulateness: Components of the community are able to verbalize clearly their needs, views, attitudes and intentions. They are also able to express their perceptions of their positions vis-a-vis the positions of the other community components	Extent of residents' willingness to speak out with an unpopular position Extent of residents able and willing to speak in front of a group <ul style="list-style-type: none"> • of other community residents • of "outsiders"
Communication: Not only is information sent and received but it is sent and received accurately. This accurate information is based on the development of common meaning among the communicators, which requires that senders of messages take the role of recipient and respond (covertly) to the messages in the way they anticipate that the other will respond. Erroneous perceptions are corrected and common meanings are established.	
Conflict containment and accommodation: Ability to establish procedures by which open conflicts may be accommodated and interaction between different parts of the community will continue.	Willingness to speak out on issues Ability to work together and reach consensus
Management of relations with wider society: Ability to use resources and supports that the larger society makes available and to act to reduce the threats to community life posed by larger social pressures.	Extent of local influence on issues in larger jurisdictions <ul style="list-style-type: none"> • phone calls and letter-writing • personal contacts Comfort with governmental representatives
Machinery for facilitating participant interaction and decision-making: Ability of a community to establish more formal means for ways to ensure representative input in decision making as size of community increases.	Extent of resident influence on local jurisdiction <ul style="list-style-type: none"> • phone calls and letter-writing • personal contacts Effectiveness of local governing body Extent of power-sharing within community

* Goepfinger and Baglioni suggest that the factors derived through a factor analysis, are not isomorphic with Cottrell's categories, they are highly related the constructs.

Empowerment

Perception of influence over decisions affecting the community

Political efficacy

Perception of influence over organizations of which individual is a member

Participation

- visiting, letter writing, or calls to public officials
- attending a public meeting, rally, or protest
- working with others to address a specific problem
- involvement in political campaign or political action
- financial contribution to a particular community cause

Perceived effectiveness of various types of participation

Level of perceived social support

Level of community satisfaction

Measures of community connectedness

Community and organizational competence

Success in securing needed resources targeted towards goals

Community residents make choices in policy areas previously left up to "experts"

Neighborhood governance

- frequency of board meetings
- presence of clients and residents on boards and committees
- perception of balance of control between board and executive director
- estimated actual neighborhood influence over priority formation at governmental or organizational levels

Residential status of decision-makers

- CBO board of directors
- CBO chief administrator or executive director
- town council

Empowerment

As discussed in the introduction, community empowerment models derive, in part, from individual conceptions of efficacy and individual empowerment. Plough and Olafson (1994) contend that empowerment is the sense of efficacy that occurs when people realize they can solve the problems they face and have the right to contest unjust conditions; it operates on personal, interpersonal, and political levels. Other authors have ascribed to empowerment the character of a *process* rather than a sense; that is, it is a means by which people, organizations and communities gain mastery over their own affairs and democratic participation in the life of their community (Rappaport, 1987; Rappaport & Zimmerman, 1988). Empowerment is also believed to promote individual and organizational participation in civic life. In an empowerment model, the goals of participation include 1) increased individual and community control, 2) political efficacy, 3) improved quality of life, and 4) social justice (Wallerstein, 1992).

Traditionally, empowerment at the community level has been measured as changes in aggregated levels of individual self-efficacy. Some researchers (e.g., Eng & Parker, 1994; Sampson, 1992) argue that interchanging the community with the individual as the unit of the analysis denies the unique group aspect of community empowerment and competence. In other words, the whole is not always the sum of its parts. Some authors have attempted to address this situation.

Perceived and manifest control. Schultz and her colleagues attempt to address this

individual-, organizational-, and community-levels of perceived control are influenced by demographics, perceived effectiveness of action, and participation in voluntary associations (Schulz, Israel, Zimmerman, & Checkoway, 1995). For these authors, perceived control is the operationalization of the concept of empowerment. Although, it does not measure the actual changes in conditions due to participation, perceived control does reflect the understanding that change can occur.

A factor analysis of the twelve scale items used to measure perceived control, produced three variables entitled *individual* (2 items, $\alpha=.66$), *organizational* (5 items, $\alpha=.61$), and *community control* (5 items, $\alpha=.63$). The following five items constituted the *community control* construct:

- By working together, people in my community can influence decisions that affect the community.
- I am satisfied with the amount of influence I have over decisions that affect my community.
- People in my community work together to influence decisions that affect the community.
- I can influence decisions that affect my community.
- My community has influence over decisions that affect my life.

One of their major findings was that members of voluntary organizations were more likely to believe that their actions can influence community activities; members were also more likely to have taken some action in the past year. The authors do recognize the possibility of reciprocity in the causal relationship between perceived efficacy of action and membership in a voluntary organization.

The outcome measurements developed by Schultz and her associates focus on the psychological and attitudinal sense of empowerment at both the individual and community levels. For interventions aimed at fostering changes in the communities' consciousness about a health issue, developing the community's skills at taking concerted action such as lobbying or generating structural change such as reorganization of a decision-making body, the outcome measurements will need to be developed within the context of the particular intervention and its goals (Hawe, 1994). This requires individuals involved in design and implementation to clarify what the expected changes or outcomes are prior to the initiation of the intervention and then design their evaluation accordingly.

The level of governance and control exerted by a community's residents is a concrete manifestation of community empowerment. Measures of governance might entail the presence of community residents on boards or committees or the frequency of such meetings. It might be assessed by the observation of residents making choices in policy areas previously left up to "experts." Cummings and Glaser (1985) used residential status of the board of directors and of the chief administrator or executive director as an indicator of local control.

Local influence could also be measured by the perception of balance of control between a community advisory board and an executive director or other administrative staff. Similarly, one might examine residents' estimated influence over priority formation at governmental or organizational levels.

In community-level interventions grounded in the theories of action research and social action, empowerment has also been equated with increased political and social involvement of the target population, the group or community's ability to secure desired municipal and non-governmental services and the group's proficiency in getting their issues in local, state and federal policy agendas (Chesler & Chesney, 1988; Marquez, 1990). Whether or not a community is capable of successfully mobilizing in the aforementioned ways is partially determined by the degree of citizen civic awareness and interest, often referred to as civic involvement, and the levels of available social capital in the community.

Social Capital

Putnam describes social capital as the "... features of social life that enable participants to act together more effectively to pursue shared objectives." For him, the critical features of social life include social networks, social norms, and social trust-what he refers to collectively as *civic* engagement. In this conception, people are able to build trust within existing social networks as well as develop new social networks through association with other community residents and organizations. Cibulka (1992) notes that social capital is the relationships among adults that provide an informal structure on which formal citizen participation can be built.

Relatively few studies have actually proposed concrete variables, either quantitative or qualitative, that measure a community's level of social capital. The variables presented here have been inferred from the constructs that have been identified as key to the development of social capital.

One of the most important features to Coleman (1990) is the connectedness or closure of social relationships among families and children in a community. He found that people living in neighborhoods in which there were more obligations, expectations, and social networks (i.e. *density of social networks*) took more responsibility for the supervision of children who were not their own, thus, reducing the amount of delinquent behavior in those neighborhoods. As described earlier, *cross-generational links* among parents and children within social networks amplifies the level of social influence extant in the community. Without the

Social Capital

- Density of social networks
- Density of cross-generational social networks
- Strong kinship friendship ties
- Trust of neighbors
- Reciprocity with neighbors or other community members
- Trust in government agencies and officials
- Voluntary cooperation
- History of collective action
- Levels of participation in horizontally-ordered voluntary associations
 - labor unions
 - rotating credit associations
 - sports clubs
 - mutual aid societies
 - cultural associations

existence of norms of *trust and reciprocity*, individuals may choose to act in their own best interest, regardless of the benefits to the community of acting otherwise.

Participation in social and civic activities is a critical aspect of social capital. This includes participation in horizontally-ordered voluntary associations (e.g., labor unions, sports clubs, or cultural associations) which allow people to share resources and work collaboratively to solve problems. Putnam (1995) stresses, though, that hierarchical organizations with their distinct chain of command and corresponding rules, organizations based on one individual providing a service to another, and national or regional organizations do not offer much room for people to build relationships based in trust and reciprocity. Past history of collective action is another indication of the level of social capital characterizing a given community.

Some of the barriers that may prevent a community from either having or generating adequate levels of social capital are:

- Memberships in hierarchical or vertically ordered organizations
- Unresponsive political institutions
- Resource constraints-either inadequate or restricted funding
- Political and economic inequality
- Complexity of social problems

Civic Involvement

In spite of the obstacles to them, voluntarism and civic participation generally are credited as the primary vehicles for the development of social capital within a community. Plaut, Landis and Trevor (1992) identified several variables that may be used as an indicator of a community's level of civic involvement.

- neighborhood governance
- presence/strength of community advisory board
- number of local candidates for public office
- voter registration

These variables combine aggregated individual and community-level data to measure community members' participation in and control over public life. It is hypothesized that in communities with high levels of participation, individuals are more likely to believe they are capable of influencing decisions and activities that may affect their future; therefore, it is easier to mobilize them around an issue or problem that is of concern to them.

Florin and Wandersman (1984) designed a questionnaire to determine how perceived effectiveness of action in conjunction with one's perceived obligation to participate influences their decision to become involved. They hypothesized a cognitive-behavioral motivational dynamic comprised of the variables seen in the following table.

Determinants of Participation
(From Florin and Wandersman)

- | | |
|-------------------------------------|--|
| • Subjective stimulus values | Personal values concerning neighborhood improvement |
| • Self-regulatory systems and plans | Individual's self-imposed standards for behavior (sense of citizen duty) |
| • Construction competencies | Cognitive and behavioral skills necessary to participate in a block-improvement organization |
| • Encoding strategies | Perceptions of the block (satisfaction with community qualities) |
| • Expectancies | Expectations concerning consequences of their neighborhood involvement |

Examples of the scale items for *expectancies* are as follows.

- I don't think public officials in this city care much about what people like me think.
- The way people vote decides how things are run in this city.
- Political leaders usually represent the special interests of a few powerful groups and rarely serve the common needs of all citizens.

Florin and Wandersman (1990) also questioned individuals about the willingness to perform a neighborhood activity, e.g. sign a petition, testify at a public hearing, volunteer or serve on a neighborhood committee. For many researchers, the degree of voluntarism is the key indicator of civic involvement. In most of the studies reviewed, voluntarism included the provision of goods and services as well as time.

Despite the fact that volunteers are in high demand, their sacrifices are often greater than their rewards. Walt, Perera and Heggenhougen (1989) discuss several reasons for high turnover rate among volunteer community health workers in Sri Lanka. Although this study has an international context, the findings may be applicable to the United States. These authors identified four major reasons for the high turnover rate. In this project, low levels of structure and supervision made it difficult to maintain the interest of volunteers. Secondly, the volunteers in this activity were often political appointees rather than selected by the respective communities; community residents expressed a particular appreciation for those volunteers who were from the community. In addition, many of these volunteers had expectations of their internship leading to paid employment (a particular need in an area characterized by few job opportunities), which was not available to the vast majority. Finally (and related to the third reason, there was a lack of sufficient non-monetary incentives for volunteers to remain. Clearly, the level of primary financial resources available to potential volunteers influences their ability and willingness to participate. Conversely, though, residents with full-time employment may have less time to commit, even if it is financially feasible for them to offer assistance without concern for remuneration or other material incentives.

Public discourse. Goodman and Steckler (1989b) propose that two of the three critical conditions for the adoption of health promotion programs are 1) public awareness and concern about the program and 2) public receptivity for the program or a programmatic solution. These are two aspects of public involvement that relate to public discourse that occurs relative to a particular topic. Initiating public discussion is a primary concern in many models of social change. The social marketing literature cites one goal of the process as being putting the issue “on the public agenda” (cf. Andreasen, 1995). Similar language

Civic Involvement and Participation
Neighborhood governance
Presence/strength of community advisory board
Number of local candidates for public office
Level of voter registration
Level of voting in local elections
Willingness to <ul style="list-style-type: none"> • sign a petition • testify at a public hearing • volunteer • serve on a neighborhood committee
Extent of voluntarism related to specific cause
Extent of voluntarism for particular agency
Extent of voluntarism in community (general)
Personal values concerning neighborhood improvement
Individual's self-imposed standards for behavior (sense of citizen duty)
Skills needed to participate
Expectations concerning consequences of their neighborhood involvement
Motivation for volunteering <ul style="list-style-type: none"> • altruism • incentives
Time available to commit to volunteer efforts (related to availability of other resources and to time committed to other employment)
Attrition (turnover) of volunteers

comes from the activist perspective, with Marquez (1990), for instance, citing the need for introduction of political initiatives onto the public policy agendas.

Rienzo and Button (1993) discussed the role of organized public opposition in the establishment of school health clinics. They noted that organized opposition played a major role in those situations where communities failed to get clinics. This organization was generally in the form of letter writing campaigns and petition circulation.

Competing interests can sometimes be the source of this opposition, as in the case of the tobacco industry resisting the development of smoking cessation coalitions. However, Thompson and her colleagues (Thompson, Corbett, Bracht, & Pechacek, 1993) did not find a significant relationship between competing conditions and community mobilization for smoking cessation.

Community-level Issues in HIV Prevention: Planning, Infrastructure, Capacity, and Policy

HIV prevention planning and collaboration.

The current state of HIV prevention planning, infrastructure, and capacity to a number of community -level variables that address many of the issues discussed here. The HIV Prevention Community Planning process has highlighted community-level issues that CDC believes to be critical in planning, developing, implementing, and evaluating comprehensive approaches to HIV prevention that meet the needs of particular communities. The crux of the process, *community planning*, acknowledges the importance of a participatory approach that values and incorporates the needs and desires of consumers as well as providers, of affected community members as well as the scientific community. Therefore, the very act of successful community planning is a community-level indicator of community-wide participation and consensus development for a set of community actions.

HIV Prevention Planning, Infrastructure, and Capacity

Successful community planning

Capacity of HDs and NGOs to

- participate in systematic planning (related to empirical and perceived needs)
- develop and implement efficacious, effective, and efficient programs
- monitor (evaluate) their effectiveness
- develop coordinated, collaborative systems with government and other NGOs for addressing HIV prevention

Emergence of community leaders

Presence of minority HIV/AIDS task forces

Extent of partnerships among private and public organizations for HIV prevention

School (board) involvement

Church involvement, particularly in minority communities

Collaboration, not just representation

Extent of Collaborative Relationships

Beyond the development and implementation of a community planning group, the objectives of the Community Planning process include

- setting priorities among target populations
- choosing priority intervention strategies based on scientific evidence and community input for those priority populations
- developing coordinated, collaborative systems among the health department, other government agencies, non-governmental organizations for addressing HIV prevention systematically in the community.

In reference to similar planning groups for smoking cessation, Thompson, Wallack, Liechtenstein, and Pechacek (1990) point out that it is true collaboration, not just representation, that determines the effectiveness of such a health promotion effort. In a slightly different vein, Davidson and Cotter (1993) discuss the positive relationship between the extent of collaborative relationships and the development of public support for an issue of common concern.

HIV prevention service capacity. As first manifest in this country in San Francisco (Bye, 1990; Coates, 1990), community-wide participation of multiple sectors has been viewed as a critical aspect of primary prevention approaches aimed at core normative and behavioral determinants. The involvement of providers and citizen supporters is essential in a multicomponent approach (Person & Cotton, 1996). From a community's perspective, this breadth is filled with both providers for whom HIV prevention is a primary function and others for whom support of HIV prevention is an addition to their main work. This latter group is comprised of health and human services providers as well as volunteered support from individuals, businesses, and social and religious groups.

Leidl (1994) describes *capacity* as the potential population coverage of an intervention or array of interventions; in other words, it is the resources available to some entity—a health department, a CBO, or an entire community—for serving a given population. Capacity utilization, then, is the potential population coverage divided by the number of people reached or served (i.e. supply divided by demand). Related to community interventions in smoking cessation, there has been discussion of the need for increased community capacity to modify smoking behavior (Thompson, Wallack, Liechtenstein, & Pechacek, 1990). In particular, they suggest a need to assess the quantity, diversity, and availability of prevention services).

In the context of HIV prevention, Coates (1990) discussed the need for a wide variety of interventions to reach individuals, captive populations, and the entire community with information and motivational and persuasive messages. He also noted the importance of a sufficient **infrastructure** to support risk reduction. This ancillary capacity includes drug treatment for IDUs, STD control for genital ulcers and other STDs, outreach to provide contraception to high-risk women of reproductive age, and social services for people with HIV infection.

A community's capacity for providing HIV prevention services may reflect the likelihood of community-wide changes in HIV risk behaviors and the resulting incidence of HIV infection. This might include the sheer number of providers and the potential and actual reach of each. Trends in this capacity measure might be used to track changes in the reach and penetration of prevention efforts. Availability and accessibility of services are other measures of the feasibility of utilizing the existing service capacity. Policy and programmatic decisions may influence these factors and, thus, be capacity-related measures themselves. Similarly, the presence of strong referral networks among providers is an important determinant of the optimal utilization of existing services. Finally, capacity must be ongoing to maximize its impact. Program sustainability is the outcome of intraorganizational management and community support (as manifest through endorsement and resources).

Several authors talk about need to involve the broader community in HIV prevention to augment the ubiquity and pervasiveness of messages **and norms** (e.g., Coates & Greenblatt, 1990; Cotton & Person, 1996; Johnson, Ostrow, & Joseph, 1990; Mays & Cochran, 1988; O'Reilly & Higgins, 1993).

Community mobilization generally entails enlisting both individuals and businesses and organizations developed for other purposes initiate HIV prevention activities. Governmental agencies are re-learning the lessons that not-for-profit and other CBOs have long known-that volunteer support is necessary to achieve the desired reach into the community, the pervasive and persistent presence, and the influence that can only be brought to bear by neighbors and peers. In addition, the involvement of complementary organizations like schools, churches, businesses, and other health and social service agencies further enhances this blanket of normative influence. Thus, the presence of voluntarism, involvement from agencies or organizations whose sole purpose is not HIV prevention (e.g., schools, churches, businesses), and collaboration among the array of providers are all important aspects of community-level issues in HIV prevention.

**HIV Prevention Capacity
and Community-wide Participation**

Capacity

- Extent and variety of interventions
- Coverage of population by these interventions (potential and realized)

Infrastructure to support risk reduction

- drug treatment for IDUs
- STD control for genital ulcers and other STDs
- outreach to provide contraception to high-risk women of reproductive age
- social services for people with HIV infection

Availability and accessibility of services

Program sustainability

Community-wide participation

Organizations developed for other purposes initiate HIV prevention activities

Participation in HIV prevention by individuals and businesses

Levels of volunteerism from the target population for such activities as networking to provide information and social reinforcement, canvassing, public speaking, telephone contact

Diffusion related to HIV prevention. The concept of diffusion of innovation (Rogers, 1983) may be related to community-level issues in HIV prevention in a number of ways. In the AIDS Community Demonstration Projects (O'Reilly & Higgins, 1993) and the Prevention of HIV in Women and Infants Demonstration Projects (Person & Cotton, 1996), the diffusion concept dealt most directly with the idea of the diffusion of messages and norms from people exposed first-hand to the intervention (peer networkers, outreach specialists, or media materials created for and used in the interventions) to other community members.

Diffusion of HIV Prevention Messages and Technology

- Diffusion of HIV prevention messages
- Diffusion of HIV prevention technologies and strategies
- Diffusion of community interest
- Quantity and quality of media coverage of HIV prevention

One indirect measure of diffusion, then, might be the psychosocial or behavioral changes in the unexposed members of a treatment community as compared to members of a comparison community. The hypothesis for this effect is that exposed individuals in the treatment community would show the greatest changes, unexposed

residents of the treatment community (i.e. potentially indirectly exposed to the intervention) would show the second largest changes, and the residents of the comparison community (i.e. unexposed directly and unexposed indirectly) would show little or no change (e.g., CDC, 1996).

There are other aspects of HIV prevention in communities that might also be characterized by their diffusion throughout communities. For instance, specific intervention techniques or strategies may be adopted by other community providers, suggesting potential normative influences or collaborative relationships. Similarly, measures of the broader community's interest and investment in HIV prevention as an important community issue might be subject to the influence of diffusion.

HIV prevention-related laws and policies.

There are a number of areas in which policy-setting may be strongly related to HIV risk and protective behavior. Needle exchange is a central topic in the current discussion of HIV prevention related to injection drug use. Because of the legal and social ramifications of drug use in our society, laws and policies concerning needle exchange, possession of injecting equipment, and related topics are critical to the resulting prevention implications. Similarly, school HIV education and

Laws and policies related to HIV prevention

Policies related to

- syringe and other injection equipment use
- needle exchange
- immigration and HIV status
- youth access to condoms
- school HIV education
- civil rights for infected

youth access to condoms are other topics that have generated much public discourse and which have commensurate policy and legal guidelines associated with them. Other topics that also have associated laws and policies that might affect HIV prevention in the community are immigration policy, and civil rights for people infected with HIV. A proxy measure for community values related to such issues might be laws or policies concerning civil rights protection for homosexuals.

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Summary Tables of the Indicators

Results from Indicator Survey --Information--			
Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
A Formal systems ¹	General Audience	Passive access to information --HIV/STD/AIDS --basic sexuality --HIV/STD protection method --pregnancy prevention /family planning --basic drug and alcohol --injecting drug use	#/% that include information about each in sex education classes or other forums
			# courses/groups in which HIV/AIDS prevention is covered
			# of referral/resource lists, posters, pamphlets, etc., which provide HIV/AIDS information and/or hotline number
			% resources in "hassle free" locations (e.g., left on table in library)
A All formal systems	General Audience	Active access to information --HIV/STD/AIDS --basic sexuality --HIV/STD protection methods --pregnancy prevention/family planning --basic drug and alcohol' --injecting drug use	% that distribute information to all clients/participants regardless of whether the information is directly requested
			% with Internet access to HIV/AIDS information (e.g., CDC AIDS website, CAPS website, etc.)
			# of people taking resource materials/classes
			#/% who know where to refer
			#/% who make referrals
A Formal systems	General Audience	Provision of HIV education to parents & extended family	#/% of activities or groups for parents in which HIV prevention is taught
			Time per parent in HIV prevention education

¹ Formal systems include schools, churches, health care, social service, law enforcement, government, business, and voluntary organizations. Within those systems, the range of groups and organizations is broad. For instance, businesses include bars, bookstores, hotels,, drugstores, etc.

Gei Location	Population	Specific Community Characteristic	Potential Community Indicator
			#/% of group/organizational newsletter devoted to HIV topics
A all systems that offer informa- tion	General Audience	Staff training --information --cultural relevance	#/% of staff who demonstrate proficiency in HIV biological and epidemiological information (Test/Direct Classroom Observation)
			#/% of in-service training opportunities for staff re: HIV/AIDS in general for members of target population: in specific, interviewing techniques; cultural sensitivity (e.g., race, gender, sexual orientation, alcohol/substance use)
			#/% HIV-related exercises in general training (e.g., employee orientation, management training)
			#/% of all staff completing HIV training
A all systems that offer informa- tion	General Audience	Appropriate information or effective HIV prevention curricula	% that use curricula with empirical designation as curricula that works
			appropriateness of materials/classes (e.g., comprehension level, relation to target population)
			% teach ALL modes of HIV transmission and safe sex practices
			% which include safer sex options beyond abstinence
			% that distribute age targeted and/or counselor education
			Target group participation in design and delivery of HIV prevention programs
A all systems that offer informa- tion	General Audience	Effective communication of information	Mechanisms for maintaining confidentiality
A all systems that offer informa- tion	General Audience	Rewards for demonstrating information proficiency	#/% with rewards program in classroom for participants
			#/% with reward program for teachers

² "Staff" will be used very broadly to include staff in all levels of organizations or groups including school board administrators, principals, teachers, directors of social service organizations, volunteers, parents, etc.

Call Location	Population	Specific Community Characteristic	Potential Community Indicator
A as approp. for systems that offer general courses	General Audience	Inclusion of HIV information with all curricula	#/% of non-health classes addressing HIV
			#/% of HIV related exercises in classes (math problems, psychology discussions, political science case studies, etc.)
A formal systems	General Audience	HIV knowledgeable / supportive public	#/% of public forums held by group/organization on HIV prevention
			#/% reporting support for prevention efforts
A formal systems	General Audience	Outreach activities for target population	# CHOWS
			Ratio CHOWS to other staff/volunteers
			#/% conduct outreach (provide condoms, HIV prevention literature) to commercial sex workers, brothels
			# and type of outreach activities (e.g., safer sex)
			Quality of outreach activities
A formal systems	General Audience	Access to information	# of community HIV/STD health education presentations in multiple settings (churches, workplaces, rec centers, family planning clinics)
A formal systems	General Audience	Access to information	# of available sexual risk reduction counseling sessions for target population members and partners
A formal systems	General Audience	Access to information	% that ear-mark a specific budget for HIV/AIDS education
			% HIV budget for each target population
A1 Schools	General Audience	On-site student health clinics	% schools with clinics that provide HIV information
			% schools with clinics that provide referrals for services
A1	General Audience	Access to information	#/% of books providing HIV information either as topic of book or included with other relevant content in school library
			% schools with non-class locations where information is available
A3 Health care	General Audience	Credible source activity	Minutes spent per week by primary care providers in HIV/AIDS prevention

Call Location	Population	Specific Community Characteristic	Potential Community Indicator
			#/% primary care physicians conducting sexual interviews
A3	General Audience	Access to information	# "newly HIV positive" seminars
			# post-exposure clinics
			% facilities that provide HIV testing, counseling, referral
A3	IDU	Workers routinely ask about and look for evidence of IDU	% who do this
A3	IDU	Specialized services for IDUs	Extent to which IDUs attend STD clinics that provide safer sex education to IDUs (which may differ from what they do with other attendees)
A3	WHR	Primary care providers routinely ask women about: a) family planning; b) substance abuse; and c) violence	% of charts that indicate history and/or counseling on these issues
			% of patients who report provider discussed these issues
			% of women who report providers asked and offered assistance to remove them from the violence
A4 Public Institutions	General Audience	Access to information	% with libraries with display of HIV materials
			% local colleges with courses on gay/lesbian issues and/or HIV/AIDS ³
			# of faculty doing research or community service regarding HIV/AIDS
A6	IDU	Access to information	Distribution of information on laws regulating drug use and drug testing
A7 Business	General Audience	Access to information	Bars (etc) showing ASO videos
			# of gay/non-gay bars participating in safe sex display contests and/or condoms
			% managers of gay/non-gay clubs who routinely talk to patrons regarding safer sex
A7	IDU	Drug dealer cooperation with HIV prevention	% of drug dealers who tell IDUs (and other users who are likely to have sex with IDUs) to use condoms)

³ Note that the content of the course may make it more relevant to culture (e.g., if the focus is on attitude change)

City Location	Population	Specific Community Characteristic	Potential Community Indicator
A9	General Audience	Correct AIDS info/press support of HIV prevention	Declarations in press that HIV does not cause AIDS
			Letters to the editor on primary prevention issues
			Articles on primary prevention issues
			# of column inches on HIV/AIDS in local newspapers
A9	General Audience	Access to information among low literacy populations	Increased distribution of specialized low literacy materials
A9	General Audience General Audience	Access to information	# of billboards, ads on buses, subway stations, etc. with hotline number and safer sex information (per census tract)
			#of PSAs on HIV/AIDS
			#/% of media outlets in which HIV prevention is provided
			#/% of individual outlets' space (column inches, total minutes/hours, etc.) devoted to HIV prevention messages/social marketing efforts
A9	General Audience	Promotion of HIV prevention activities in the community	#/% of media outlets in which HIV prevention activities are highlighted
			#/% of individual outlets' space (column inches, total minutes/hours, etc.) devoted to HIV prevention activity promotion
A9	General Audience	Inclusion of HIV information with related program content	#/% of "for your health" news programming that includes HIV information
			#/% of feature programming that includes HIV in the story line (e.g. soap operas with safer sex issues raised during sexual scenes, dating story lines in sitcoms address HIV, newspaper articles, etc.)
A9	IDU	Access to information	# of targeted PSAs via small media and specific radio shows adapted to IDUs
			# of mass media announcements addressing HIV/AIDS in relation to injecting drug use

City Location	Population	Specific Community Characteristic	Potential Community Indicator
A9	MSM	Access to information	# of newspaper articles on HIV/AIDS, homosexuality, homophobia ⁴
			# of radio/TV stories on HIV/AIDS, homosexuality, homophobia
			# of community publications targeting gay men as audience ⁵
			# of mass media announcements which address HIV/AIDS in relation to homosexual behavior
A9	WHR	Access to information	# of media announcements on HIV/AIDS in relation to heterosexual transmission and reproductive health
			# of PSAs promoting safer sex on radio stations targeting high risk women audience
A10	IDU	Skills building	# of al-anon groups offering safe sex messages/materials directed to friends and partners of IDUs
A11	General Audience	Access to information	#/% of families reporting they discuss HIV / sexuality with their teens and frequency of discussions
			#who agree "I have a family member whom I trust for accurate information and referrals for HIV/AIDS
			families knowledge of referral resources
			% families (presuming a survey of the target population or a population-based survey) that actively discuss HIV/AIDS and alcohol/drug use (including injection)
A12	General Audience	Access to information	# parents and community leaders who advocate for HIV/AIDS education
A12	IDU	Access to information	# of community leaders who publicly address HIV/AIDS in relation to injecting drug use
A13	General Audience	Access to information	% opinion leaders targeted for outreach activities

⁴ Note that the content of the stories may make them more relevant to culture (e.g., if the focus is on attitude change)

⁵ Note that the content of the publications may make them more relevant to culture (e.g.; if the focus is on attitude change and/or issues not related directly to HIV/AIDS prevention)

Call Location	Population	Specific Community Characteristic	Potential Community Indicator
			# who agree "I have a friend or peer member whom I trust for accurate information and referrals for HIV/AIDS
A13	General Audience	Access to information	circulation of HIV/AIDS information in the social networks of target population (networks of users as well as networks of users with other friends, family, etc)
			% of information acquired through social networks (as opposed to other sources)
A14	General Audience	Access to information	# of prevention messages encountered in 30 minute walk through community
A14	General audience	HIV information is available	#% of public spaces with HIV outreach workers frequently distributing HIV information
A14	IDU	Access to information	% of known injecting sites in public areas where HIV/AIDS information is posted or distributed
A14	WHR	Access to information	% public restrooms with battered women's shelter hotlines

Results from Indicator Survey

--Skills--

Call Location	Population	Specific Community Characteristic	Potential Community Indicator
B Formal systems	General Audience	Skills building education --negotiation with partners --negotiation of sexual boundaries --negotiation of sexually transmitted disease protection methods --hands-on skills building of the correct way to use a condom and carrying condoms --of effective strategies for accessing information (factual and skill building) --pregnancy protection negotiation --setting personal limits re: drugs --negotiation of boundaries re: drugs (e.g., saying "no" to peer pressure) --general life skills --general decision-making and problem solving skills --general assertiveness training/skills --general self-esteem	#/% of HIV skills related exercises in classes (negotiation, problem solving, decision making)
			% which include each type of skill building component in HIV sex education or other classes
			% of groups who conduct or participate in programs related to each
			% locations where information about each is available (also applies to gov't, physical space, & public sex venues)
			#/% opportunities to role play and demonstrate skills
			% time decision-making skills taught per grade year
			# guided risk reduction skill-building encounters
B [A • GI vs. SS] ⁶ all systems that offer skill building	General Audience	Skills building education --negotiation of sexual boundaries --negotiation of sexually transmitted disease protection methods --hands-on skills building of the correct way to use a condom and carrying condoms --of effective strategies for accessing information (factual and skill building) --pregnancy protection negotiation --setting personal limits re: drugs --negotiation of boundaries re: drugs (e.g., saying "no" to peer pressure)	appropriateness of materials/classes (e.g., comprehension level, relation to target population)
			# of people taking resource materials/classes
			# of people who read resource materials or see/hear PSA
B all systems that offer skill building	General Audience	Knowledgeable instructors of skills building curricula	#/% of staff that demonstrate proficiency in skills building (Testing / Direct Observation)
			% staff who could demonstrate proper condom use
			#/% of in-service training opportunities for staff and volunteers

⁶ Characteristics which may apply to both general information (A) and acquisition of skills (B) will be identified in this document by the general information vs. skills specific notation "GI vs. SS"

Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
			#/% of all staff/ volunteers completing skills building training
			#/% activities or groups for parents in which skills building is taught
			#/% per parent in skills building education
			#/% of adults in the family who have attended a parenting for HIV prevention class
			#/% of joint parent/student training
B all systems that offer skills training	General Audience	Rewards for demonstrating skill proficiency	#/% with reward program for teachers and staff
			#/% with reward program for students
B Formal systems	WHR	Other relevant skills	# of women support groups to facilitate empowerment
B Formal systems	IDU	Other relevant skills	% with classes or counseling for families of IDUs
			% with classes or counseling for families working with IDUs
B 2 Churches/ Faith Groups	WHR	Pastoral counseling	% pastors who report they help women negotiate gender roles that promote safer sex with their partners
B 8 formal systems	General Audience	Provides resources for skills training	\$ available for HIV skills training
			% of HIV skills training \$ targeted for different target populations

Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
B9 (A - GI vs. SS) media	General Audience	Skills building education --negotiation with partners --negotiation of sexual boundaries --negotiation of sexually transmitted diseases protection methods --hand-on skills building of the correct way to use a condom and carrying condoms --of effective strategies for accessing information (factual and skills building) -pregnancy protection negotiation --setting personal limits re: drugs/alcohol --negotiation of boundaries re: drugs/alcohol (e.g., saying "no" to peer pressure) --general life skills --general decision-making and problem solving skills --general assertiveness training/skills --general self-esteem	# of media-related advertisements (e.g., condom billboard, condom commercial)
			#/% of individual outlets' space (column inches, total minutes/hours, etc.) devoted to HIV skills training messages/social marketing efforts
B9	General Audience	Inclusion of HIV skills with related program content	#/% of "for your health" news programming that includes HIV skills information
			#/% of feature programming that includes HIV skills in the story line (e.g. soap operas with safer sex skills raised during sexual scenes, dating story lines that include negotiation for safer sex, newspaper articles, etc.)
B11 families	General Audience	Provision of skills training to children	#/% of families reporting they have skills training as part of their HIV prevention discussions
			#who agree "I have a friend or peer who I can turn to for help in protecting myself from HIV/AIDS"
			# who agree "I have a family member whom I can turn to for help in protecting myself from HIV/AIDS"
B12 (A - GI vs. SS) informal change agents	WHR	Cadre of outreach peers effective in high risk environment	# of welfare clients given specialized training and jobs in working with vulnerable peers
B13 social networks	General Audience	Skills building	frequency of discussion of sexual negotiation and condom use within context of friendship and social network members

Call Location	Population	Specific Community Characteristic	Potential Community Indicator
			frequency of discussion of alcohol/drug use and safer injecting and sexual practices within social networks

Results from Indicator Survey

Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
C all systems	General Audience	Access to protective products	# of miles to available condoms
			Average cost of condoms
			# condoms distributed at no cost to community members
			# which have condom or other protective device distribution or condom vending machines (e.g., hotels, taxis, clinics)
C all systems	General Audience	Ease of access to condoms	% of groups/orgs that provide clients with hassle-free access to condoms
C (A) all systems with relevant space	General Audience	Information and protective products are available anonymously	#/% of groups/org with universal provision of condoms (hallways, lunch rooms, etc)
			#/% of groups/org with universally available condoms, etc.
			#/% of groups/org with private places with protective products where the space is also used for other reasons (not exclusively HIV or sexuality)
			#/% that offer anonymous or confidential HIV testing
C healthcare social ser public ins	General Audience	Availability of services -HIV/AIDS -Drug Treatment - STD -Reproductive Health Care -Family Planning -Battered Women's Shelters -Homeless Shelters -Other Social Services	# of such services in the community
			% of agencies which provide services regardless of clients' ability to pay
			#/% that specifically serve target population
			#/% that restrict clients (e.g., don't all pregnant women)
			# of different days and time periods that services are offered
C Multiple Systems	General Audience	Accessibility of services	% that are accessible by public transportation
			% that take Medicaid clients
			% of alcohol and drug treatment programs that take Medicaid
C healthcare social ser public ins	General Audience	Availability of services	% located in the population's natural environment, community, neighborhood

Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
C healthcare social ser public ins	Multiple Population (MSM, WHR)	Provider services taken to remote locations or to areas used by targeted population	#/% of providers with remote health care sights
			#/% of provider/employer partnerships bringing services to the workplace
			#/% of provider/school partnerships bringing services to the classroom or school grounds
			#/% of providers accessing high risk populations through "mobile units"
C all systems except family social networks media & opinion leaders	Multiple Population (MSM, WHR)	Grounds discourage anonymous behaviors	#/% of rest rooms, alleys, etc. with motion sensor lighting
			#/% of rest rooms, alleys, etc. with regular supervision or patrol
			#/% of rest rooms, alleys, etc. with low traffic
			#functioning lights
C (E) all systems	MSM	Acceptance shown for gay youth/adults	#/% of "safe space" stickers used to designate understanding and supportive staff
C All systems	General Audience	School grounds available after school hours	#/% offering supervised after-school activities for target populations
C Multiple Systems except families social networks; change agents	General Audience	Opportunities for unsafe sex	% of public institutions with anonymous sex sites
			# of other public institutions with special meeting times/places for gay and lesbian groups (offering alternatives to sex on premises establishments)
C1	General Audience	School makes condoms available in areas where target population feels safe and confidential	% target population who agree "This school makes it easy for me to get condoms when I want to"
C1	IDU	Physical environment re: illegal drugs	% schools where sale of illegal drugs (injecting and non-injecting) is not easily available
			% of schools with active police presence aimed at controlling drug traffic
C1	WHR	Provision of clinics for women and teens	% of schools that have a clinic specializing in women's sexual health issues

Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
			% of schools that have a clinic specializing in adolescent medicine/health
C2	General Audience	Church hosts NA/AA groups where individuals can discuss personal relationships	% of churches that host NA/AA groups #of NA/AA groups per week
C3	General Audience	Physical environment (and availability of services)	# of health care and social services specifically for target population (such as special STD clinics or employment training)
C3	IDU	Drug Treatment Programs (DPTs)	Number of DPTs in each modality % that offer treatment on demand evidence that incentives are used to encourage entrance into treatment # clinics/hospitals offering screening programs for IDU # IDUs referred to drug treatment Size of waiting list
C5	IDU	Access to information and social support	Evidence that monthly "social programs" are accessible and available to IDUs
C7	General Audience	Access to information	# of pharmacies in targeted community with displays of condoms encouraging easy access and use
C7	General Audience	Protective products easily available, inexpensive, or free	#/% of businesses with protective products (condoms, spermicide, etc.) available. (bathrooms, counter tops, near telephones, etc) at low cost or for free #/% of business which actively distribute protective products to customers and employees at a low cost or for free #/% of businesses co-marketing with protective products/services #/% of retailers with protective products moved to active merchandising areas (vs. in cases, behind counters or arrangements requiring patron to request product from salesperson)
C7	General Audience	Businesses allow community to use grounds	#/% of businesses allowing use of sports grounds for community use #/% of businesses allowing use of space for health fairs, etc
C7	MSM	Opportunities for unsafe sex	Sex clubs with private rooms

Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
			Sex clubs with screening procedures
			Sex clubs with no private spaces
			% sex on premises establishments with condom distribution
			% businesses with venues for sex on premises -- glory holes, dark rooms, etc.
C8	General Audience	Provides for public safety so people aren't afraid to participate in civic life	\$ spent on public safety
C10 (A, E)	MSM	Community ownership of prevention	Prevention activities not initiated or carried out by ASO staff/ volunteers %
C11	General Audience	Access to physical infrastructure	% owning radio, telephone, television
			% walking distance to shops and amenities
			% difference in terms of relative costs of goods and services across neighborhood
			% perception reliability of services
			% accessible transportation
			% car owners
C11	General Audience	Safe environment	% who think neighborhood is safe
			% burglaries/theft/vandalism of property
			% who say they can move around in the neighborhood
C12 (A)	General Audience	Support of HIV prevention by non-attributable authors	Graffiti encouraging risk reduction
C12	General Audience	Community support for HIV prevention	Visible evidence of primary prevention efforts in target areas
C13	General Audience	Opportunities for unsafe sex	Environmental context in which social network meets is conducive to unsafe sex
			Purpose of social networks (e.g., support, social, sexual)
C14	General Audience	Protective products readily available	#/% of spaces with outreach workers distributing protective products for free
C14	General Audience	Opportunities for unsafe sex	# of bars per census tract
			# of night clubs per census tract

Call Location	Population	Specific Community Characteristic	Potential Community Indicator
C14	General Audience	Neighborhood satisfaction	satisfaction with: litter and rubbish; smells and fumes; speeding traffic; noise levels; discarded needles; assaults and muggings; burglaries; uneven pavements: street lighting
C14	Multiple Population (MSM, WHR)	Risk taking behavior discouraged with sight lines/barriers	#/% of spaces with barriers preventing public viewing or "sense of safety" by local residents
			#/% of spaces with hedges or barriers that block sight lines
C14	IDU	Settings for using or dealing	# of known crack houses
			Existence of "needle parks"
			% of abandoned/boarded up buildings
C14	MSM	Risk taking behavior discouraged with supervision	#/% of spaces with regular citizen patrols frequently passing, through them
			#/% of spaces with police surveillance schedules
			#/% of spaces with regular park personnel or park police supervision
C14	MSM	Public spaces are used for creating connections among adults	#/% of public spaces that advertise alternative activities for gay adults
			#/% of public spaces used by gay organizations for alternative events
			#/% of public spaces with a "host" introducing adults to each other and promoting safer sex / discouraging anonymous or public sex
C14	MSM	Availability of partners	Cruising areas census at 2:00 am
C14	MSM	Unsafe sex opportunities	# of parks with areas (e.g., bathrooms, secluded areas) that provide opportunities for unsafe sex
			# of public areas without outreach workers.
			Frequency of police patrols and repression (which can, ironically, lead to unsafe sex with hurried and hidden relations with no time for negotiation or condom use)

Results from Indicator Survey

Call Location	Population	Specific Community Characteristic	Potential Community Indicator
D all systems with staff and volunteer	General Audience	Sensitive instructors of skills building curricula	#/% of teachers demonstrating cultural competence (Test/Direct Classroom Observation)
			#/% of all faculty completing cultural training
D all systems expect public places	General Audience	Peer leaders reinforce information/skills	#/% of peers reporting that they have encouraged others to practice safer sex
D healthcare social ser public ins	General Audience	Agency attitudes and norms regarding sex phobia and safer sex	% of agencies which routinely screen for sexual and safer sex behavior in a nonjudgmental way as part of their intake
			range of safer sex options which are promoted within each health care agency
			% of agencies which endorse the right of clients to make informed choices about their sexual and safer sex behavioral practices
			% of which endorse behavioral aspects of sexuality
			% people who are involved in HIV-related volunteer activities
D multiple systems	General Audience	Broadly based conception of health	literature conceptualizing health from a broad range of perspectives: social, environmental, economic, and political and that demonstrates an understanding that health issues cross sectors and boundaries
D all systems with property	Multiple Population (MSM, WHR)	Grounds kept free of anti-gay graffiti / messages	Length of time before anti-gay or anti-woman graffiti (in bathrooms, on walls, etc.) is removed
			#/% of incidents of anti-gay or anti-woman graffiti and removal
			# cases of harassment, jokes, etc

Call Location	Population	Specific Community Characteristics	Potential Community Indicator
D all systems except public spaces	MSM	MSM openness/acceptance	% with openly gay staff/volunteers
			# of openly gay staff/volunteers
			% which openly acknowledge gay participants in a nonjudgmental or supportive way (e.g., news article, gay pride activities)
			participation in gay awareness or gay pride events
D healthcare social ser public ins	MSM	Agency attitudes and norms regarding homophobia	% of agencies which are considered "gay-friendly"
			% of agencies which routinely ask clients about their sexual identity and/or practices in a nonjudgmental way as part of their intake
D multiple systems	MSM	Attitudes and norms regarding homophobia	increased # of non-judgmental presentations and sensitivity training
			#/% of books addressing gay youth psycho-social issues
D all systems except family social network, opinion leader, & public places	WHR	Dating violence	% with teen dating violence seminars
D all systems except public spaces	WHR	Cultural environment	% with sex education that addresses gender power relations
			% that endorse traditional gender roles
D1	General Audience	School boards and PTAs that disapprove of sex education	% of school boards and PTAs that disapprove of sex education
D1	General Audience	Campus attitudes and norms regarding sex phobia	% of schools which include non- biological aspects of sexuality (e.g., emotional intimacy, love, homosexual relations)
D1	IDU	Cultural environment	% of schools that address injecting drug use and HIV/AIDS in a non-judgmental way

Col Location	Population	Specific Community Characteristic	Potential Community Indicator
D1	WHR	School staff respond when males tease or harass females who request information on HIV or condoms	% of teachers who respond positively when asked "Do you speak up when you see a boy harassing a girl about HIV information or condoms?"
D2	General Audience	Religiosity	Communities with high proportion of regular church attendance
D2	General Audience	Church attitudes and norms regarding sex phobia and homophobia	% of churches endorse sexuality as an important part of relationships, beyond procreation
			% of churches which openly condemn non-procreative sexual relations
			% of churches who openly condemn sodomy or homosexuality
			# churches addressing homosexuality in a non-judgmental way
			# churches delivering anti-gay sermons
			% ministers who favor tolerance of sexual difference
			% formal declarations against homosexuality; strict interpretation and judgement based on scripture
D2	General Audience	Church attitudes and norms regarding HIV/AIDS	% of churches which endorse the use of HIV protection methods
			% of churches which openly condemn the use of HIV protection methods
			% of churches which are involved in HIV-related volunteer activities
			% ministers who preach tolerance regarding PWA
D2	IDU	Acceptance of IDUs	% of ministers preaching tolerance of injecting drug users
			% of religious institutions that address injecting drug use and HIV/AIDS focusing on harm reduction (as opposed to moral condemnation)
D2	MSM	African American homophobia	# of AA ministers who demonstrate tolerance/compassion towards gay men
			# of AA churches that sponsor "forums/seminars" on diversity of lifestyles

Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
D2	MSM	Out, gay youth safely integrated in church and activities	#/% of gay youth reporting "they feel comfortable with church staff and at church activities"
D2	WHR	Female youth safely integrated in church and activities	#/% of female youth reporting "they feel comfortable and safe with church staff and at church activities"
D2	WHR	Cultural environment	% ministers who discuss male-female relations and gender power inequality % pastors who report that they consistently speak out against men who use violence or intimidation against their partner % of women in congregation who report hearing these messages
D2	WHR	Encourage norms supportive of non-violence against women	% of faith groups that encourage non-violence against women
D3	General Audience	Cadre of well-trained health professionals to conduct safe sex counseling and outreach	increased workshops and in-services on racial sensitivity (CEUs offered)
D3	Multiple Population (IDU, WHR)	Health center makes homeless, drug using, recent immigrant women feel welcome	% population in these categories who agree "Center makes me feel welcome"
D3	Multiple Population (MSM, IDU)	Fear	Fear/irrational concerns re: HIV among health care professionals
D3	IDU	Barriers to health care seeking	# of health care provider staff-in-services to improve professional attitudes towards and working skills with drug users
D3	WHR	Barriers to health care seeking (e.g, inaccessible STD clinic hours, hostile staff, legal loss of custody of children due to drug use, child care)	# of health care provider staff in-services to improve professional attitudes towards and working skills with women in high risk situations
D4			
D5 (F)	General Audience	Acceptance of importance of prevention	% health budgets spend on prevention
D5	General Audience	Emphasis on prevention in community	AIDS fundraisers which mention primary prevention
D5 (A, B)	IDU	Cultural environment	% agencies with formal training for staff in dealing with injecting drug users as clients
D5	IDU	Discrimination toward drug users	% agencies with sensitivity training

Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
D5	MSM	Ratio of HIV prevention to care	% of World AIDS Day activities focusing on primary prevention among gay/bi men
D5	WHR	Cultural environment	% agencies with training on special issues involved with women and AIDS
D6	General Audience	Trust of law enforcement	# of officers convicted of corruption charges
			# of community based organizations that work with the police and probationary services
D6	IDU	Cultural environment	Survey of law enforcement officers attitudes toward injecting drug users
D6	IDU	Cultural environment	# of arrests during a given time period
			# of convictions relative to number of arrests
D6	IDU	Safe physical environments, especially for homeless	Decrease in reported assaults/robberies of target population
D6 (F)	IDU	Attitudes regarding IDU	Informal/formal policy to target drug use & treat it only as criminal behavior
			Extent to which police take condoms away from IDUs (or poke holes in them with pins)
			Extent to which police take sterile syringes away from IDUs (or trample/break them underfoot)
D6	IDU	Extent of forced sex while incarcerated	% of male & female IDUs who report having been coerced and/or raped in their last incarceration a) by guards; b) by other inmates
			% of male & female IDUs who report having had condoms used by their assailant when they were coerced and/or raped in their last incarceration a) by guards; b) by other inmates
D6	MSM	Existence of strong peer support	##/% of case loads assigned with sexual orientation issues addressed
D6	MSM	Out, gay youth and adults safely integrated in provider and activities.	##/% of anti-gay harassment charges responded to
			##/% of gay youth/adults who report they feel "safe" or that staff is "responsive to gay issues"

Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
D6	MSM	Cultural environment (social tolerance)	Existence of gay/lesbian community liaison program and/or gay/lesbian law enforcement officers
D6	WHR	Institution encourages women to talk about HIV and exchange information	% who say it is easy to talk about HIV in this place
D6	WHR	Promotion of women among officers/staff	official participation in special events promoting women's issues (e.g., rape prevention)
D6	WHR	Zero tolerance of sexual harassment and domestic abuse	Decrease in the number of reported crimes
			% with a domestic violence task force
D7	General Audience	Perception of safety	% people who feel they can make transactions in local businesses without fear of violence, theft, or discrimination
D7	General Audience	Acceptance of safe sex	Number of personal ads starting safe sex
D7	General Audience	Drug and alcohol use	Number of phone sex messages encouraging partying
			Popper sales
			Alcohol sales
			% non alcoholic beverages in bars
			% clientele daytime bar use
D7	General Audience	Private sector support of prevention efforts	# bar staff verbally encouraging customers to stay safe
D7	General Audience	Emphasis on body image(or interest in health)	Gym memberships
D7	General Audience	Positive social environment	% non-gay identified businesses that sponsor AIDS walks and similar activities
			% non-gay businesses making corporate gifts to HIV/AIDS related projects or business organizations
D7	IDU	Positive social environment	% of businesses with self-disclosed IDU workers
D7	MSM	Agency attitudes and norms regarding homophobia	% of businesses which are considered "gay-friendly"
D7	MSM	Acceptability of gay lifestyle	# of gay bookstores, bars
			# of violent incidents against gays
D7	MSM	Unsafe sex	# of gay clubs that openly discourage

Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
			% clubs with safer sex charter or safer sex guidelines posted for sex premises venues
D7	WHR	Zero tolerance of sexual harassment and domestic abuse	surveys of organizations and groups reflect changing attitudes and practices
D7	WHR	Agency attitudes regarding sexism	% of businesses which promote women's issues
D8	IDU	Cultural environment	Frequency of discussion of drug use in political forums -- tenor of discussions: "just say no" as opposed to alternative approaches
D8	MSM	Homophobia	% elected officials calling for a decrease in hate crimes and increase in tolerance for MSM and PWA
			% of politicians who openly support gay rights
			number of public statements against homosexuality
D8	WHR	Institutional attitudes and norms regarding sexism	% of politicians who openly support women's issues
			number of public statements for/against egalitarian roles for women
D9	General Audience	Media resources dedicated to prevention in community press	\$ value of donated advertising space [for prevention messages]
D9	General Audience	Media inclusion of healthy behavior/porn producers support of HIV prevention	Porn Videos showing condoms
D9	General Audience	Demonstration of knowledge and attitudes re HIV prevention	Letters to the editor on primary prevention issues
D9 (A)	General Audience	Representative of local views	% local stories
			% personal testimony
			% reporting on the strengths of the local community as well as weaknesses
			% reporting and promoting positive norms
D9	IDU	Accurate portrayal of problem and risk factors	Proportion of stories that are accurate
D9	IDU	Social/cultural support	Ratio of supportive to non-supportive or negative editorial commentaries by local electronic and print media

Call Location	Population	Specific Community Characteristic	Potential Community Indicator
D9	MSM	Homophobia	presence or absence of TV characters, local news commentators, etc. who are self-identified gay or lesbian
			#of column inches on hate crimes, prejudicial treatment of MSM
			# editorials, letters to the editor calling for increasing tolerance of PWA and decreasing gay/lesbian homophobia
			GLAAD reports on pro/anti-gay media
D9	WHR	Portrayal of women's sexuality as erotic, pleasurable, or intimate	% of tv shows that portray female nudity
			% of tv shows that illustrate or discuss women as acceptable targets of sexual violence
			% of tv shows that use degrading language towards women
			# of billboards per census tract that show women drinking alcohol
D9 (A)	WHR	Agency attitudes and norms regarding sexism	% of media outlets which are considered pro-women and pro-equal rights
			# announcements on women and AIDS
			# of articles and reports in newspaper and television about women and AIDS
D10	IDU	Drug users' organizations (DUOs, also known as junkiebonden or as users' groups) See Friedman, de Jong, & Wodak, 1993 in <u>AIDS</u> 92/92 7 suppl 1): S263-269)	Extent to which DUOs engage in conscious efforts to change sexual "culture of risk"
			Extent to which DUOs support IDUs (or their sex partners) who insist upon safer sex with their partners
D10	MSM	MSM Openness/Acceptance among members	% of groups which reach out to gay identified populations (e.g., advertisements in gay press)
			% of groups (# of members) involved in HIV-related volunteer activities
D11	General Audience	Safe environment	Opinion on social problems such as male drinking, local gangs, neighborhood violence, wife beating, fear levels, drug use
D11	MSM	Acceptance shown for gay youth and adults	#/% of parents responding that they feel "supportive of the gay community"
			#/size of PFLAG style meetings in the community

Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
D11	WHR	Zero tolerance of sexual harassment and domestic abuse	Surveys of organizations and groups reflect changing attitudes and practices
D11	WHR	Cultural environment	Survey of family attitudes on HIV/AIDS in relation to women, children, family relations, etc
D11 (E,F)	WHR	Barriers to health care seeking	Professional advocacy for Moms or moderation of penalties affecting child custody if mother is confirmed drug user
D12	IDU	Cultural environment	Attitudes expressed by community leaders: # of calls for police repression as opposed to harm reduction
D12	MSM	Cultural environment (homophobia and social tolerance)	% of parents and other non-gays advocating for pro-gay legislation and programs
D13	General Audience	Group attitudes and norms	Normative sexual behaviors
			range of safer sex options which are promoted within each group
			extent to which safer sex talk is encouraged
			gender roles and gender norms within group
D13	General Audience	Community norms support turning to others for help in HIV prevention	% who agree "In this neighborhood, it's easy to talk to people about HIV and safer sex"
D13	Multiple Population (MSM, WHR)	Cultural environment	% of networks in which members encourage safer sex
D13	IDU	Norms about IDU	Extent to which communities at large explicitly condone IDU
			% community population estimated to use drugs
D14	IDU	Cultural environment	Tolerance of unsafe injecting practices in public sites
D14	MSM	Cultural environment (social norms)	% of sex on premises venues vs. cruising areas for meeting with sex taking place in other private settings (cultural value placed on impersonal sex in public with little opportunity for negotiation)
D14	WHR	Cultural environment	survey of cultural attitudes on sexual interactions in public spaces

Results from Indicator Survey --Structure--			
Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
Multiple Systems			
E multiple systems	General Audience	Peers distribution of protective products and information	#/%with peer distribution programs
			#/% trained peer educators
			#/% in peer-led education class
E multiple systems	General Audience	Adult education	# of accessible adult education courses
E multiple systems	General Audience	Voluntary groups	# voluntary groups
			type of voluntary groups
			membership in voluntary groups
			frequency of activities
			attendance
			connection to other groups
E multiple systems	General Audience	Target population safely integrated in activities	#/% of target population and adults participating in activities (e.g., sports, club activities, arts projects, etc.)
			#/% of target population and adult couples attending social events
			#/% of times target population and adult groups are included in community or business-wide activities
E all systems except family, change agents, public places	General Audience	Social support	% volunteers for AIDS patients
			# volunteers for HIV-related activities
			#with support groups for target population &HIV+ (media could be Internet)
E multiple systems	MSM	Non-gay peers integrated into support structure	#/% of non-gay peers participating in support group
			#/% of non-gay peers as key members of informal network

Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
E multiple systems	General Audience	Inclusion of adults in youth support structure	#/% of parent/child support groups
			#/% of youth reporting they "have someone to talk to" about sexual orientation , violence, IDU, sexual behavior
			#/% of counselors reporting ongoing and supportive interaction with youth
			#/% of youth's parents or extended family acting as chaperones
E multiple systems	General Audience	Coordination of services	% that participate in HIV/AIDS provider networks
			# in network partnerships
			% that maintain outside referral/resource lists of services not offered in-house
			Size, configuration, and exchange among systems re: HIV/AIDS in specific and target populations in general (e.g., shared information, resources, # meetings)
			% that participate in cross-training of staff
			% that join coalitions for HIV/AIDS prevention
			% involved in community planning process
E multiple systems	General Audience	Non-hierarchical structure	horizontal working practices
			devolved decision making and control
			evidence of ability to transcend professional and lay boundaries
E multiple systems	General Audience	Flexibility	Policies for managing change
			mechanisms for changing institutional roles
			proactive as well as reactive activities and programs
E multiple systems	General Audience	Equity among risk groups served	Needs assessments of target population
E multiple systems	General Audience	Opportunities for economic self-sufficiency	#/% of programs designed to encourage economic self-sufficiency
			#/% of providers offering job or entrepreneurial training

Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
			#/% of providers offering job opportunities to target population
			#/% of scholarships designated to assist target population
			#/% of government or non-profit entities, or businesses providing economic self-sufficiency loans
			#/% of money re-paid into revolving account (or % retained)
			# of community lending banks
			#/% with mentoring programs
			Unemployment rate
			% target population employed full or part-time with benefits
			# of economic development grants
E multiple systems (churches, health care)	General Audience	Non-discrimination policies in place	#/% with non-discrimination policies (in employment and promotion and access to services/treatment for target population, HIV+, and PWA)
E multiple systems	General Audience	Existence of strong peer support	#/% of alternative activities
			#/% of female/ MSM/ IDU volunteers and staff members
			#/% of male peers participating in support group
			#/% of male peers as key members of informal network
E Multiple Systems	General Audience	Community support	# of organizations/agencies that offer activities/events for IDUs to socialize and offer instruction re: safe sex
E multiple systems	WHR	Promotion of women among staff	% with women in positions of power/ decision-making
			#/% of female staff
E multiple systems	WHR	Promotion of women	% offering specific programs/ events targeting women
			# of feminist media outlets or those that which sponsor or cover women's community activities
			% of women in community

Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
E multiple systems	WHR	Day. care	#/% that provide day care
E All Systems	General Audience	Discrimination	# reports of discrimination against members of target population
E All Systems	General Audience	Involvement in prevention	# of target population collaboratively involved in the development and delivery of public health messages and risk reduction methods
Schools			
EI School	General Audience	PTA / School Board	# involved
			Frequency of activities
			Attendance
			Information given out about activities and governance
			Information given about the ways in which parents' wishes have been incorporated into policy and practice
EI	General Audience	Community members/opinion leaders involved in school talks, events, etc	# involved
			frequency of activities
			attendance
EI	General Audience	Mentors	% with mentoring programs
			% with after school programs
Churches/ Faith Groups			
E 2	General Audience	Inter-faith council that focus on or have as their agenda reduction in HIV/AIDS in their community	% of churches/faith groups from community that belong to council
			% of churches/faith groups on council that have activities focused on HIV/AIDS
E 2	MSM	Social Structure	# of religious groups open to gay and lesbian members
			# of churches that offer services/activities for gay/lesbian
E 2	WHR	Social support	# of churches with activities or organizations for females (e.g., meetings, socials)

Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
Health Care			
E 3	General Audience	Improved public health coordination	# epidemiological studies measuring prevention activities
E 3	IDU	Social environment	Increase role of teaching hospitals to improve drug treatment/rehab
E3 (F)	WHR	Barriers to health care seeking (e.g, inaccessible STD clinic hours, hostile staff, legal loss of custody of children due to drug use, child care)	Professional advocacy for Moms or moderation of penalties affecting child custody if mother is confirmed drug user
Other Public Institutions			
E4	General Audience	Local representation in agenda and priority setting	Committee membership
E 4	MSM	Improved public health efforts and community ownership of issue	Admission to professional training programs by out gay males
Formal Social Service			
E 5	General Audience	Quality of prevention efforts	Salaries of health educators
E5 (F)	General Audience	Ratio of HIV prevention to care	% AS0 budgets spent on prevention
Law Enforcement			
E 6	General Audience	Coordination and linkage	Extent to which law enforcement works closely with social service and treatment community
E6	IDU	Law enforcement	% of IDUs imprisoned in last year
			% of prison/jail inmates who are incarcerated for drug-related crimes
			% of police on drug squads
			% of police engaged in "street sweeps" against users or on intensive patrol in drug-market/use neighborhoods
E6	WHR	Existence of strong peer support	#/% of case loads assigned with women's issues addressed
E 6	WHR	Inadequate legal and social support for dis-empowered women in domestic abuse situations	# of women support groups to facilitate empowerment

Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
Businesses			
E7 (C)	IDU	Pharmacy approaches to IDUs	% of pharmacies which welcome IDUs
			% who sell syringes to IDUs
			% which exchange syringes for IDUs
			Extent to which each also provide condoms (price?) to IDUs
			% of drug dealers
E7	IDU	General business stigmatization and repression of drug users (which will increase user alienation & marginalization; and also be related to extent to which users are homeless)	% of IDUs who used to have jobs but lost them for drug-related reasons
			% of local employers who engage in urine testing
E7	IDU	Drug dealers/markets	Drug prices
			% of IDUs' income spent on drugs
			% of IDUs who engage in sex trade in order to afford drugs
			% of crack smokers who engage in sex trade in order to afford drugs
			% of IDUs who report that they have formed new sex partnerships due to prior partner's leaving town to avoid arrest
E7	MSM	Businesses	% businesses identified as "gay only"
E7	MSM	Alternatives to bars	% communities with organized recreational activities for gay men other than bars
E7	MSM	Alcohol Use	Ratio of alcoholic to non-alcoholic (cafes, etc) gay social sites
E7	WHR	Flexible working hours or ability to work at home	% that allow women flexible working hours or the opportunity to work at home
E7	WHR	Supportive of women in managerial positions	% of women in businesses in managerial positions
E7	WHR	Equality of wages between men and women	proportion of women and men that make the same amount of money for the same position
			% of women compared to men in part-time positions
E7	WHR	Accessible resources	# of businesses that are relevant to women and are in the community/neighborhood

Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
Formal Political Systems			
E8	General Audience	Civic engagement	# voting
			# canvassing or lobbying membership of a political organization
			% people who feel they can express dissent
			high level of trust/reciprocity
			% people who understand how the political process works at the local and national level
Voluntary Organizations			
E10	General Audience	Ownership of HIV prevention as an issue	# volunteers in ASO prevention programs
			# activists targeting prevention issues
E10 Volunteer organizations, social network'	General Audience	Drug users' organizations (DUOs, also known as junkiebonden or as users' groups)	Number of organizations, networks, change agents for target population
			# of active members
			% of target population in community who are members
			% of target population in community who are in contact
E10 Volunteer organizations, social networks, change agents	General Audience	Policy-related influence of local drug users' organizations	Extent to which organizations, networks, change agents are represented in research projects' community advisory committees
			Extent to which organizations, networks, change agents participate in public demonstrations on AIDS-relevant issues
			Extent to which org., networks, change agents testify before legislative and executive committees
			How familiar are local public health, social service, and police officials with local groups/networks/change agents

⁷ See Friedman, de Jong, & Wodak, 1993 in AIDS 92/92 7 suppl 1): S263-269.

Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
E10 Volunteer org., change agents	General Audience	Drug users' organizations (DUOs, etc.)	Extent to which org. members or change agent members are accepted part of their networks
			Extent to which org. members or change agent members are leaders of other networks
E10	MSM	Cultural environment (gay cultural structures)	# of gay/lesbian clubs and voluntary organizations
E10	WHR	Group attitudes and norms regarding sexism	% or # of women's groups
E10	WHR	Female head of households	% of families that are headed by women
E10	WHR	Female head of households living in poverty	% of female head of households living below the poverty line (the lowest fifth)
E10	WHR	Number of children living with female head of households	Mean number of children among female head of households
E10	WHR	Mediating structures	# of voluntary organizations that target low income women for assistance of some kind
			collaboration of organizations to provide assistance
E10	WHR	Availability of support structures	# of organizations with activities providing support for low-income women from minority communities, etc
Families			
E11	General Audience	Amount and kind of contact with families (see e.g., Neaigus A, et al. "The relevance of Drug Injectors' Social networks and risk networks for understanding and preventing HIV infection" Social Science and Medicine, 38 (1994) 1:67-78	% of target population who report they are in touch with other family members
			% of target population who report that they are in touch with non-user family members
E11	IDU, MSM	Norms about IDU	extent to which families explicitly condone IDU/ MSM
E11	General Audience	Cultural environment	# of family members involved in support activities
E11	General Audience	Existence of strong peer support	#/% of alternative activities for youth family provides
			#/% of parents reporting that they help find and connect their children to positive peer support
E11	MSM	Cultural environment (homophobia and social tolerance)	# formal organizations of "parents of lesbians and gay men"

Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
E11	General Audience	Father involvement	# of single mother households where father has significant presence in children's lives
E11	WHR	Deadbeat dads	% mothers in community not supported by the father of their children
E11	WHR	Childcare structure	hours spent per week on childcare
E11	WHR	Wage earners	% households with 2 full-time wage earners
E11	WHR	Welfare	% women living on welfare
E11	WHR	Supervision for children	% households with children unsupervised after school
E11	WHR	Immediate extended family support	support provided by immediate and extended family re: childcare, food, shelter
E11	WHR	Social support	analysis of community family structures (i.e., % of female-headed households: % three generation density of friendship networks, muki family)
Informal Change Agents			
E12	General Audience	Community ownership of prevention	Prevention activities not initiated or carried out by staff/vols (absolute or %), but rather independently
E12	General Audience	Social networking and education	numbers of new social relationships
			numbers of new horizontal networks
			new employment certification
E12	General Audience	Leadership activities	% new community/group decisions
			% newly arranged group discussions
			% increase in local opinion leaders
			# of local community organizers working to improve quality of life in the neighborhood
E12	General Audience	Level of community involvement	# of organizations & members working on issues particular to target group
Social Networks			
E13	General Audience		Out migration from high-prevalence areas
E13	General Audience		In-migration to high prevalence areas

Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
E13	General Audience	Linkages --women's groups --gay identified groups --HIV education/prevention programs --social service agencies --health care agencies	% of social networks with linkages to each
			# of linkages to different agencies within each category
E13	General Audience	Psychological integration of identities; ability to cope with grief	% of social networks that are gay/straight
E13	IDU	Structural and organizational support	% of culturally specific channels (e.g., clubs, bars, hairdressers, etc.) That participate in dissemination of HIV/AIDS information and resources
E13	General Audience	Size and formal properties of sociometric social networks Characteristics of IDUs egocentric social and risk networks (see Neaigus et al. "The relevance of Drug Injectors' Social Networks and Risk Networks for Understanding and Preventing HIV Infection." Social Science and Medicine, 38 (1994)1:67-78; and others...	% of sexual partnerships in which AIDS is discussed
			% of injection partnerships in which AIDS is discussed
			Distribution of sizes of network connected components
			% of target population who are in 2-cores of large connected components (this measure has been shown to be related to drug and sexual risk behaviors of IDUs in NYC -- Friedman et al in press AJPH)
			Density, connectivity, etc. of components
			Mean and median size of egocentric injection network of target population
			Mean and median sizes of egocentric sexual network of target population
			Distribution of relative age of male IDUs and of their IDU and non-IDU female sex partners
		Distribution of relative ages of female IDUs and of their IDU and non-IDU male partners	
E13	General Audience	Social structure (support networks)	composition of social networks: family vs. friends; target pop. vs non-target pop., etc.
E13	MSM	Normalization of gay life near high prevalence areas/gay meccas	Evidence of social outlets in suburbs near high prevalence areas
E13	MSM	Normalization of gay life away from high prevalence areas/gay meccas	Evidence of social outlets increasing in areas of original immigration
E13	WHR	Sharing community for childcare	# of cooperative arrangements for childcare

Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
EI3	WHR	More effective social outreach/networking to vulnerable women	United Way funds more "alternative" agencies/networks with women as priority (e.g, ex-prostitute clubs)
EI3	WHR	Inadequate legal and social support for dis-empowered women in domestic abuse situations	# of women support groups to facilitate empowerment
Public Places			
EI4	IDU	Location/setting effects on sexual (and drug-injecting) behaviors and networks	% who have sex in crack houses; and number of partners on these occasions
			% who have sex in shooting galleries; and numbers of partners on these occasions
			% who inject in crack houses; and number of partner on these occasions
			% who inject in shooting galleries; and numbers of partners on these occasions
			% who inject in outside drug-hangout settings; and numbers of partners on these occasions
EI4	IDU	Extent to which IDUs live and/or inject in public places	% who are homeless
			% who live in shelters
			% who inject in public places

**Results from Indicator Survey
--Policy/Law--**

Call Location	Population	Specific Community Characteristic	Potential Community Indicator
Multiple Systems	General Audience	Condom distribution policy (and extent implemented)	% of [systems] whose policies permit condom distribution or condom vending machines on the premises
			% of [constituents] who know the policy exists and who take condoms
			% that distribute free condoms upon request
			Gaps between policies for condom distribution and practice
			Existence of policies to prohibit distribution in any number of settings including STD clinics, public housing, county HDs
F Multiple Systems	Multiple Populations	[System] has a non-discrimination policies in place	#/% of [groups/orgs] with non-discrimination policies (in employment and promotion, regarding gay parenting, ordination, housing, etc.)
			Enforcement/ policies of anti-discrimination laws
F Multiple Systems	General Audience	HIV/AIDS Education policy	Documentation that prevention and treatment for IDUs in a priority within local public health and social services agencies
			Policies to support HIV/AIDS prevention for IDUs
			Number/duration of HIV/AIDS educational programs
			Participation in HIV/AIDS voluntary or mandatory
FI	Multiple Populations	[Group/Org Staff/Administrators] are pro-active in creating safe [environments]	#/% of schools with a safe schools program
			#/% of active interdiction by authorities in instances of [harassment of] gays, women, etc.
			Higher pay for teachers who teach sex education
FI ©	General Audience	HIV/AIDS education	policy to limit HIV/AIDS education

Call Location	Population	Specific Community Characteristic	Potential Community Indicator
F1 (A)	General Audience/ Multiple Population	Sex education policy	% of schools whose policies permit discussion of safer sex options beyond abstinence
			Policies restricting discussion of homosexuality in schools
F1	General Audience	Policies against the use of alcohol and/or drugs in the school	% of schools with policies against alcohol and/or drug use
			Policies regulating discussion of drugs in schools
			Legal consequences of engaging in drug use or sex on school grounds
F2 (D)	General Audience	Sexuality doctrines	% of churches whose doctrines consider the use of HIV protection methods a sin
			% of churches whose doctrines consider sex out-of-holy wedlock a sin
F2 (D)	MSM	Homosexuality doctrines	% of churches whose doctrines consider homosexuality a sin
			% of churches who permit openly gay clergy
F2 (D)	WHR	Doctrines towards women	% of churches whose doctrines promote traditional gender roles for women
			% of churches who permit female clergy
F3 Health care, Social services	General Audience	Confidential treatment of minors	% of health care agencies which provide treatment services to minors without parental consent
F3 (E)	IDU	Criminal activity related to supporting drug addiction	# of drug treatment slots available to incarcerated persons
			# of available drug treatment slots
			# of IDUs referred to available drug treatment
F3	WHR	Policy/Law	Policies regarding HIV testing of pregnant women
F5	IDU	Treatment policy	Allow MDs to prescribe methadone (not just treatment centers)
F6	General Audience	Drug use	# methamphetamine manufacturing arrests
F6	IDU	Policy/Law	Local laws and policies regarding enforcement related to drug use

Call Location	Population	Specific Community Characteristic	Potential Community Indicator
F6 (D,E)	IDU	Attitudes regarding IDU	Informal/formal policy to target drug use & treat it only as criminal behavior
F6	IDU	Sentencing Policies	% policies regarding incarceration vs. treatment
F6	MSM	Institutional policy	% monitoring and surveying inmate interaction
F6	MSM	Reduction of opportunities for male rape in jails	Policy of enforced monitoring and reporting to citizen board
F6 (D)	WHR	Policy/Law	Presence of policy makers advocating decriminalizing sex work
F6 ©	WHR	Opportunities for unsafe sex	Corrections facilities policies regarding condom availability and conjugal visits
F6	WHR	Institutional Policies	Notification of health status incarcerated mate
F7	General Audience	Alcohol use Increased cultural norms against alcohol intoxication Club policies re: alcohol and unsafe sex	Availability of responsible beverage services
			% of policies/bars with policies to limit drinks
			Sex clubs with alcohol/drug policies
			Policies which limit businesses that provide venues for multi-partner unsafe sex
F7 (D)	General Audience	Policies allow volunteer time/family time	#/% of businesses that actively encourage employees, to volunteer in HIV prevention efforts
			#/% of businesses allowing paid time off for community service
			#/% of businesses allowing paid time off for adult/child activities
F7	Multiple Population (MSM, WHR)	Safe premises policies	#/% of businesses using private security when appropriate to maintain the safety of patrons
F7	WHR	Protection of commercial sex workers	% of brothels that require clients to use condoms
F7	WHR	"Enforce brothel owners to assist commercial sex workers with uncooperative clients"	
F7	WHR	"Monitor compliance with condoms through regular review of STD rates"	

Cell Location	Population	Specific Community Characteristic	Potential Community Indicator
F7	WHR	"Apply graduated sanctions for non-compliance, targeting brothel owners, whose establishments are closed if repeated violations occur"	
F8	General Audience	Support service policy	# of policies in place to support low income people with opportunities to improve their lives
F8	General Audience	Government support of targeted HIV prevention	# of public health officials and legislators speaking, protecting, and prevention efforts
F8 (D)	General Audience	Government preparedness to support targeted HIV prevention	# legislators briefed in primary prevention
F8 (C)	IDU	Policy/Law	Changes in policy due to legislative initiative (e.g., legalization of needle exchange programs)
F8	MSM	Legal recognition of gay rights	<ul style="list-style-type: none"> Legality of same-gender sex Legality of sodomy Legality of same-gender marriage Anti-gay discrimination and harassment statutes
F8	WHR	Legal recognition of women's rights	<ul style="list-style-type: none"> Anti-female discrimination and harassment statutes # of laws which disproportionately impact disadvantaged women
F8	WHR	Policy/Law	Legislation related to testing of pregnant women, HIV/AIDS discrimination
F8	WHR	"Allowance for more women in political office"	
F8	WHR	"Dissolution of policies which force women on AFDC to suffer reductions when they try to secure employment"	
F8	WHR	"Workfare?"	
F9	General Audience	Condom advertising	Policies on condom ads (e.g., time of airing, etc.)
F9 (A)	IDU	Harm reduction announcements	Policies regulating harm reduction announcements
F10	IDU	Policy-related influence of local drug users' organizations	Are local DUOs funded by 1) local authorities? 2) state authorities? 3) federal authorities? 4) influential foundations or corporations? (Funding by all of these has happened in the USA)

Call Location	Population	Specific Community Characteristic	Potential Community Indicator
F10	WHR	"Existence of AFDC policies that disapprove of women and the father of their children living together"	
F13	IDU	Drug law policies: Arrests disrupt both sexual and injecting partnerships. This increases the rate of partner change and thus probably increases the spread of HIV	Existence of drug law policies
F13	IDU	Urban/business development processes that lead IDUs to have a move (which can lead to: a) disruption of sexual networks, and thus to higher levels of partner change; b) disruption of injection networks, and thus to higher levels of partner change; c) homelessness and resultant difficulties in maintaining safer sex practices or safer injection practices (because of having nowhere to stockpile condoms or syringes)	Extent of urban/business development in IDU neighborhoods
F14	Multiple Population (MSM, WHR)	Prostitution	Policies regulating prostitution
F14	Multiple Population (MSM, WHR)	Sex in public places	Policies regulating sex in public places
F14	Multiple Population (MSM, WHR)	Curfews in public areas	Policies regulating curfews in public areas (e.g., park hours)

July 8-9, 1999 Meeting Summary

Background

The purpose of the Community Indicators meeting was to help elicit ideas on how to create guidance for developing community indicators. CDC wanted to obtain feedback and additional input with respect to the community indicator framework and issues around elicitation, evaluation, and application of indicators.

Prior to this meeting, CDC sought input from 25 individuals representing communities, academia, and research institutions. These individuals brain-stormed a list of over 200 community indicators. CDC invited ten of the 25 individuals for a meeting to prioritize the indicators. The focus of the meeting was to 1) develop the goal of the indicators, 2) define terms associated with using the indicators (e.g. community, culture), and 3) develop a relevant and useful model for using HIV indicator data.

Meeting Summary

Community indicators historically have been social indicators that draw on quantitative, qualitative and archival data. Qualitative indicators are generating increasing interest but have received little empirical investigation. These indicators can serve multiple functions, reflect multiple perspectives, involve multiple methods, be chosen in multiple ways, and be associated with multiple resources, needs, and interests. Some considerations in building a model for community indicators include the inclusion of community and program elements, theoretical considerations, what can/ cannot be measured, and indigenous models.

It is also important to define the term “community” for users of HIV indicator data. Community can be defined in terms of spatial, geographical or political boundaries. It can also be defined by social, cultural, ethnic, and racial factors.

Meeting participants discussed some ways in which HIV indicator data can be used. Some of their responses included:

- **To help organizations obtain funding.** Indicators can show disparities in health outcomes among different populations, thus indicating a need to create interventions and request funding.

- **To strengthen the researcher-community relationship.** When you enter a community to collect indicator data, you need to tell the community why the data will be collected and how the data will be used (e.g. to plan interventions). It is very important to maintain a strong researcher-community relationship. Communities are more receptive and are more likely to believe researchers when the latter works “with” the community rather than “on” the community.
- **To measure change in a community.** Indicators can measure any changes or detect trends in health status in the community.
- **To identify problems or characteristics of a community that one may want to intervene upon.** Data from the indicators can help researchers/community members identify specific areas that they want to focus on for their interventions.
- **Development of a community indicators model.** A model was presented for considering theories of community and its effects on individual behavior. This will be summarized in a manuscript and the guidance document. This included multidisciplinary perspectives and methods, including structural-functionalism, ecology, political economy and empowerment/social capital.

The following key points regarding the use of HIV indicator data were raised by meeting participants:

- **Increase community empowerment and use a “bottom-up” approach when using HIV indicator data.** This approach gives all community members equal access to the indicator data. This data could be used by the community to develop its own interventions and solutions to a health problem. There was also some sentiment that a true bottom-up approach won’t occur, but rather investigators can help meet data requirements for funding.
- **Assets as well as needs should be measured in the community.** Oftentimes, only the needs and negative characteristics of a community are addressed and the positive characteristics of a community are not addressed. CDC can investigate capacity and asset-based entities in the community and work with community residents to locate resources within the community.
- **Difficulties of trying to measure change at the community level.** It can be harder to conceptualize and explain how behavior can be changed at the community level than at the individual level. It becomes especially difficult to measure this change or to evaluate the effectiveness of an intervention if we don’t have a clear definition of “community”.

- **CDC should provide technical assistance to end users.** CDC can provide information on how HIV indicator data can be used. Information on successful interventions (e.g. Ellen Sogolow's Replicating Effective Interventions, Linda Wright-Deaguero's project on identifying characteristics of successful CBO's, and Robin Miller's Feasibility, Evaluability, and Sustainability Assessment) can be provided.
- **Potential end users of the guidance manual.** These include community planning groups, community-based organizations, health departments, academic researchers, and graduate students

Meeting participants discussed next steps for the Community Indicator Project.

- After a final draft of the guidance manual is completed, there should be a pilot test of the manual.
- Both qualitative as well as quantitative measures should be developed for HIV indicator data.
- There needs to be further clarification on whether the indicators are the ends or the means-the guidance document should cover planning, monitoring, and evaluation.