January 18, 2002

Identifying Characteristics of Successful Researcher/Community-Based Organization Collaboration in the Development of Behavioral Interventions to Prevent HIV Infection

Task Order No. 0621-26

Literature Review

Prepared for

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Contents

EXECUTIVE SUMMARY

Historically, the transfer of HIV prevention interventions from the academic arena to practice in community-based organizations (CBOs) has been problematic. On one side, research-based HIV prevention interventions developed by academic researchers have often been noted as difficult to implement beyond a highly structured atmosphere with highly trained staff and built-in incentives. On the other side, community-based "grassroots" interventions have often been described as reputationally strong, yet lacking in rigorous evaluation. In an attempt to merge these disparate approaches, the Centers for Disease Control and Prevention (CDC) has funded this effort to examine the complexities of collaborations between researchers and CBOs.

In this paper, we describe the methods used in conducting the literature review and provide a brief overview of the theoretical literature in organizational studies on collaborative efforts. In doing so, we also describe the types of collaborative arrangements that are commonly used in developing and implementing HIV prevention interventions. Ongoing considerations for collaborative effectiveness as well as barriers and challenges that can contribute to the deterioration of collaborations are identified from the literature. In addition, we highlight relevant evidence of the impacts of collaboration and detail the process of initiating and maintaining collaborations, including elements that are critical to the longevity and effectiveness of collaborations. Finally, we present policy implications of collaboration and concluding remarks and recommendations, highlighting lacunae in the research on collaboration. The search strategy aimed to identify all available research on collaboration. In conducting an unbiased review of the evidence, we found that the great majority of material offered theory or evidence in support of collaboration as an approach.

Published research in organizational studies on collaboration uses many terms. Some theorists focus on coalitions (Mizrahi and Rosenthal, 2001), while others focus on strategic alliances (Zuckerman, Kaluzny, and Ricketts, 1995), action sets (Aldrich, 1979), joint ventures (Pfeffer and Nowak, 1976), or interorganizational relations (Sofaer and Myrtle, 1991). Mays and

colleagues (1998) found many forms in their analysis of community health alliances, from informal collaborations to contractual agreements, shared governance, and shared ownership.

Pooled risk and shared rewards are at the core of collaboration. Collaboration partners share the risks in pooling their resources and jointly pursuing a common goal (Aiken and Hage, 1968; Savitz and Swiger, forthcoming) and both stand to reap whatever rewards accrue from the collaboration. Ideally, both partners will benefit: a win-win situation for all participants (Zuckerman, Kaluzny, and Ricketts, 1995). Fundamental is the notion of exchange, based on the participants' dependence on one another for resources of value (Grembowski et al., forthcoming). Such resources may include information, money, facilities, personnel, social support, clients, and so on.

Collaboration effectiveness is complex, difficult to measure, and may differ with different stakeholder perspectives. Perceived effectiveness may vary depending on whether we observe the perspective of one partner or another, their shared stakeholders, their local community, and so on (Hall, 2002).

The Competing Values Framework (Quinn, 1988) identifies four perspectives on organizational effectiveness that reflect established streams of thought in organizational theory: the Rational Goal Model defines organizational effectiveness in terms of goal accomplishment and productivity; the Internal Process Model defines organizational effectiveness in terms of continuity, stability, reliability, and predictability; the Human Relations Model defines organizational effectiveness in terms of commitment and empowerment; and the Open Systems Model defines organizational effectiveness in terms of innovation, adaptation, growth, and resource acquisition. Although this model was originally developed to assess the effectiveness of individual organizations, studies of interorganizational collaborations have identified indicators of success that map to one or more of these models.

The literature suggests that collaborative research is important in that collaboration is empowering and enabling, rather than simply advisory in nature (Hatch et al., 1993). Collaborative efforts, such as in community–academic partnerships, can yield positive

outcomes for the study, the community, and the academic institutions involved.

Despite recent progress, technology transfer of effective science-based HIV prevention interventions from research arenas to community settings has long been identified as a significant challenge in HIV prevention. Kelly, Somlai, and colleagues (2000) assert that the likelihood of successful transfer of research-based HIV prevention technology will increase if during the planning phase researchers

- consider how interventions will be used in the field,
- obtain input from community members and service providers early on,
- test variations of interventions that may increase the intervention's applicability in realistic settings, and
- determine cost and effectiveness of intervention delivery.

The synergy created through such collaborative intervention development often facilitates technology transfer and implementation of interventions and can result in improved methodology, enhanced quality of data, and increased effectiveness of data dissemination (Altman, 1995; Jordan, Lee, and Shapiro, 2000).

There are several types of collaborative arrangements. In *CBO–Academic partnerships*, CBOs and academic institutions work together to accomplish a common goal or shared vision. In *Target Community–Academic partnerships* (a common type of community–academic partnership), researchers obtain input from individual members of the target population and may involve target population members in various phases of research over the course of the project. Collaboration among all three parties also frequently occurs, forming a *CBO–Target Community–Academic partnership*. *Provider–Researcher* collaboration is also common. Providers can be found in both the public (e.g., state and local health departments) and private (e.g., private CBOs) sectors. *Public–private partnerships*, such as those described by Bazzoli et al. (1997), represent a diverse array of public and private sector institutions including private health providers, public health departments, human service agencies, local government, educational institutions, managed care organizations, and business

coalitions. The Partnership for Healthy Communities is an example of a public health/medical provider partnership between three major hospitals in New York State and a federally qualified community health center. Finally, in *Resource–Collaborator partnerships*, experts and nonexperts communicate and collaborate in a reciprocal process in which all participants acknowledge their own and each other's resources and limitations, share resources, and recognize common gains.

Collaborations to develop behavioral interventions to prevent HIV infection are comprised of numerous key partners. Various authors have argued for the inclusion of an assortment of partners, including service providers, researchers, policy makers, community members, public health agencies, funders, and private foundations and corporations.

Numerous studies cite a wide range of benefits of collaborative approaches in achieving a reduction in risk factors (hypertension, hypercholesterolemia, and obesity) and altered health behaviors of residents (smoking, physical inactivity, unprotected sex, voluntary HIV testing) (Brownson, Riley, and Bruce, 1998; Cottrell and Ciaramitaro, 1993; Grinstead, Zack, and Faigeles, 1999). Collaborative approaches have also yielded greater access to "hard-to-reach" populations (Grinstead, Zack, and Faigeles, 1999) and improvement in health status (Levine et al., 1994)

The literature provides a great deal of information about the process of initiating and maintaining collaborations. Several elements are identified as critical to the longevity and effectiveness of collaborations. Organizing an effective, meaningful collaboration requires the involvement of all parties from the start of a project (Baker et al., 1999; Crucetti, 2000; Hatch et al., 1993; Hunter et al., 1998; Israel et al., 1998; Lynn, 2000; Schulz et al., 1998; Sormanti et al., 2001). A great deal of foresight, planning, and assessment is needed prior to entering a collaboration. Partners should be clear about the motivation, goals, and commitment that they bring to the relationship. To increase the chance for an effective collaborative relationship, partners should have a shared vision of what the collaboration will look like and what the common goals will be (Mays et al., 1998; McWilliam, Desai, and Greig, 1997). Although having common goals is a vitally important factor in creating effective collaborations, being culturally sensitive and

acknowledging diversity is also critical to the success of collaboration. As a matter of course, collaborative partners need to carefully assess their areas of expertise and "clearly and repeatedly define agency roles and responsibilities" (Schensul, 1999; McWilliam, Desai, Greig, 1997).

The most critical ongoing consideration for collaboration effectiveness is providing adequate time and resources to support the collaboration (Sanstad et al., 1999; Schensul, 1999). Resources—in the form of monetary support, individual expertise, information, and contacts—are essential in developing and maintaining collaborations (Mizrahi and Rosenthal, 2001). Another factor critical to maintaining successful collaborations is effective, open communication (Sullivan et al., 2001). Collaboration successes and achievements should be celebrated regularly, regardless of their size or importance, as a way of promoting excitement about the collaboration and bolstering commitment to the process (Cottrell and Ciaramitaro, 1993). A final characteristic of effective collaborations is the ability to remain flexible (Sanstad et al., 1999).

The full benefits of collaborations could be better understood with additional evaluation that includes effects on community outcomes and the systematic exploration of the process partners go through when designing and implementing interventions (Madison et al., 2000). As stated earlier, evaluating collaborations is a complex and time-consuming process. Additional time and funding should be available to support these new initiatives (Ferreira-Pinto and Ramos, 1995; Israel et al., 1998; Neumann, Sogolow, and Holtgrave, 2000). Because of the important benefits of collaborations, academic health institutions should increase education and training in community research and collaboration building for their students and faculty (Levine et al., 1994).

Interventions developed through collaboration benefit from the divergent expertise and perspectives that partners bring to the relationship. However, the added complexity of beginning, sustaining, and evaluating collaboration will require innovative ways to address role definition within and across agencies as well as new funding mechanisms that can adequately provide for different, changing needs.

Although the review found a rich and complex literature on collaboration, several areas are underexplored. In particular, rigorous evaluations of the impacts of collaborations are few. Many papers assume that interventions developed through community collaboration will be more feasible, acceptable, effective, and sustainable than those developed by either researchers or CBOs alone. This proposition has not yet been tested.

1. INTRODUCTION

Historically, the transfer of HIV prevention interventions from the academic arena to practice in community-based organizations (CBOs) has been problematic. On one side, research-based HIV prevention interventions developed by academic researchers have often been noted as difficult to implement beyond a highly structured atmosphere with highly trained staff and built-in incentives. On the other side, community-based "grassroots" interventions have often been described as reputationally strong, yet lacking in rigorous evaluation. In an attempt to merge these disparate approaches, the Centers for Disease Control and Prevention (CDC) has funded this effort to examine the complexities of collaborations between researchers and CBOs.

The current project is guided by the researcher–community collaborator model, a model that emphasizes co-ownership and participation in all phases of behavioral intervention research (Tyler, Pargament, and Gatz, 1983; Whyte, 1991). Studies such as Grinstead, Zack, and Faigeles' (1999) work on preventing HIV among male prison inmates and their partners; Harper and Carver's (1999) efforts to involve street youths in developing HIV prevention interventions; and Klein, Williams, and Witbrodt's (1999) work on HIV prevention among urban American Indian women all demonstrate the value of the synergy that is created through these collaborations and suggest that collaborative intervention development may facilitate implementation. However, little is known about the factors that differentiate successful collaborations from those that do not generate the expected results (Sanstad et al., 1999; Schensul, 1999).

In this paper, we describe the methods used in conducting the literature review and provide a brief overview of the theoretical literature in organizational studies on collaborative efforts. In doing so, we also describe the types of collaborative arrangements that are commonly used in developing and implementing HIV prevention interventions. Ongoing considerations for collaborative effectiveness as well as barriers and challenges that can contribute to the deterioration of collaborations are identified from the literature. In addition, we highlight relevant evidence of the impacts of collaboration and detail the process of initiating and

maintaining collaborations, including elements that are critical to the longevity and effectiveness of collaborations. Finally, we present policy implications of collaboration and concluding remarks and recommendations, highlighting the key characteristics of successful researcher/CBO collaboration in the development of behavioral interventions to prevent HIV infections.

2. METHODS

This literature review focused on researcher–community collaborations, including (but not limited to) assessments of effectiveness, sustainability, and researcher–community collaboration models. Searches included work completed both outside of and within the field of HIV prevention. The search strategy aimed to identify all available research on collaboration. In conducting an unbiased review of the evidence, we found that the great majority of material offered theory or evidence in support of collaboration as an approach.

We used RTI's computerized Information Services resources to identify and access on-line information, in addition to significant hard copy archival holdings of the nearby libraries at Duke University, the University of North Carolina at Chapel Hill, and North Carolina State University. All project staff members had access to the National Library of Medicine (NLM) Gateway, which allowed us to simultaneously search multiple databases, including MEDLINE, AIDSLINE, and databases of meeting abstracts and health services research in progress.

Our review included published studies, supplemented by proposals, works-in-progress, interim reports, and government reports. The CDC Technical Monitors also identified internal documents that should be included in our review.

Initial literature searches were conducted using NLM Gateway and MD Consult. Search terms and phrases used in the initial search included

- HIV *and* researcher *and* community-based collaboration,
- researcher *and* community-based collaboration,
- HIV research *and* technology transfer *and* community collaboration,

- HIV *and* interinstitutional collaboration,
- HIV *and* community-institution relations, and
- HIV *and* community health planning.

RTI staff forwarded the list of articles and abstracts generated from Internet searches to RTI library and Information Services staff for retrieval. Copies of journal articles and abstracts were sent to the project analyst for cataloguing into ProCite as well as for technical analysis. Additional article titles and abstracts were obtained from CDC staff recommendations and from references cited in relevant journal articles obtained from our initial search.

A standard literature abstraction form was developed, and staff were trained in its use. The abstraction form ensured a consistent method of reviewing and summarizing the literature. The following fields were included in the literature abstraction form:

- unique identifier
- full citation
- article objective
- study design
- data
- timeframe
- outcome measures or indicators
- type of collaborating organizations
- type of interventions
- findings
- lessons learned
- conclusions
- policy implications
- study limitations

ProCite was used to coordinate and compile bibliographic information of all articles and abstracts. Citations, abstracts, and keywords (when available) were retrieved through the "Search PubMed" function in ProCite. Bibliographies generated from articles and abstracts relevant to this task order were updated and sent to the Technical Monitors on a regular basis.

A template containing the major headings listed above was created for each article using Excel. Upon review and analysis of each article/abstract, information for each of the major headings was entered and stored in an Excel workbook. The information for each article was then copied and pasted into the corresponding ProCite record. The use of Excel and ProCite together enabled greater ease of data management in that it reduced the barrier posed by limited access to the ProCite database. (ProCite does not enable more than one person to access the same database at a time.)

3. FINDINGS

In this section, we present the findings of our literature review. The first two sections draw on organizational theory and discuss the meaning of collaboration and definitions of success. Subsequent sections discuss the value of collaboration and types of collaborations and review evidence of the impact of collaborative effort. This is followed by a review of the process-focused literature on how to do collaboration and lessons learned from existing efforts.

3.1 Organizational Perspectives on Collaboration

Published research in organizational studies on collaboration uses many terms. We can start with the dictionary definition of collaborate: to work together, especially in a joint intellectual effort.

Bruner (1991) defines collaboration as "a process to reach goals that cannot be achieved acting singly (or, at a minimum, cannot be reached efficiently). … Collaboration includes all of the following elements: jointly developing and agreeing to a set of common goals and directions; sharing responsibility for obtaining those goals; and working together to achieve those goals, using the expertise of each collaborator" (p. 6).

Some theorists focus on coalitions (Mizrahi and Rosenthal, 2001), while others focus on strategic alliances (Zuckerman, Kaluzny, and Ricketts, 1995), action sets (Aldrich, 1979), joint ventures (Pfeffer and Nowak, 1976), or interorganizational relations (Sofaer and Myrtle, 1991). Mays and colleagues (1998) found many forms in their analysis of community health alliances, from informal

collaborations to contractual agreements, shared governance, and shared ownership.

Traditionally, organizational theory focused on intraorganizational phenomena. The focus on collaborations and other interorganizational relationships emerged as theorists looked beyond the boundaries of individual organizations and recognized how external factors affected organizations and their participants (Scott, 1992). While some work has focused on collaborations in the business arena, most has addressed collaborations in the health and human services sector, where evidence suggests that coordinated efforts improve service delivery.

Early organizational behavior theorists studying strategic alliances among firms observed that interdependent organizations developing mutually advantageous partnerships with others succeeded in spanning their boundaries and accomplishing new or different tasks. Such cooperative partnerships bestow on participants strength and security, while still allowing a measure of independence and flexibility (Powell, 1990). Sofaer and Myrtle (1991) note that reasons for collaboration include a need to acquire scarce resources (which may be human resources, material, symbolic, etc.); a desire to reduce uncertainty; and a belief that cooperation will increase efficiency, enhance effectiveness, or reduce costs. Alter and Hage (1993) posit a theory of interorganizational networks in which the partner's size and specialization and the enterprise's complexity are central.

An early study of the conditions and strategies that facilitate progress from one stage of collaboration to the next posited a developmental trajectory from problem setting to direction setting to structuring (in which a formal structure for ongoing work is implemented) (Gray, 1985). In the problem-setting stage, collaboration is shaped by a variety of process measures, including the range of participants involved, the depth of their involvement, the extent of mutual recognition, and the existence of resources (whether material or symbolic) to support collaboration. In the direction-setting stage, shared values, a joint quest for information, and shared power all support collaboration. Finally, structuring relies on shared recognition of mutual need, successful negotiation about activities and authorities, geographic proximity, and ability to track and respond to changes outside the collaboration.

Pooled risk and shared rewards are at the core of collaboration. Collaboration partners share the risks in pooling their resources and jointly pursuing a common goal (Aiken and Hage, 1968; Savitz and Swiger, forthcoming) and both stand to reap whatever rewards accrue from the collaboration. Ideally, both partners will benefit: a win-win situation for all participants (Zuckerman, Kaluzny, and Ricketts, 1995). Fundamental is the notion of exchange, based on participants' dependence on one another for resources of value (Grembowski et al., forthcoming). Such resources may include information, money, facilities, personnel, social support, and clients.

With mutual need and exchange at the core of collaboration, there are a variety of forms that collaborations may take. Mays and colleagues (1998) point out that variation in the form and structure of collaborations is normal and expected as participants develop and adapt models best suited to their unique characteristics and objectives.

3.2 Collaboration Effectiveness

Collaboration effectiveness is complex, difficult to measure, and may differ with different stakeholder perspectives. Perceived effectiveness may vary depending on whether we observe the perspective of one partner or another, their shared stakeholders, their local community, and so on (Hall, 2002).

The Competing Values Framework (Quinn, 1988) identifies four perspectives on organizational effectiveness that reflect established streams of thought in organizational theory: the Rational Goal Model defines organizational effectiveness in terms of goal accomplishment and productivity; the Internal Process Model defines organizational effectiveness in terms of continuity, stability, reliability, and predictability; the Human Relations Model defines organizational effectiveness in terms of commitment and empowerment; and the Open Systems Model defines organizational effectiveness in terms of innovation, adaptation, growth, and resource acquisition. Although this model was originally developed to assess the effectiveness of individual organizations, studies of interorganizational collaborations have identified indicators of success that map to one or more of these models.

The Rational Goal Model's focus on productivity is reflected in studies stressing achievement of common goals (Fawcett et al., 1997; Grinstead, Zack, and Faigeles, 1999; Hearst, Mandel, and Coates, 1995; Hunter et al., 1998; Tiffany, 1999). Mizrahi and Rosenthal (2001) asked leaders of social change coalitions to define success; achieving the intended goals was the top-ranked definition.

The Internal Process Model highlights the ability to engage in activity over time. "Attaining longevity" is another definition of success in several analyses (Mizrahi and Rosenthal, 2001; McWilliam, Desai, and Greig, 1997; Quandt, Arcury, and Pell, 2001).

Creating lasting networks maps to the community-building aspects of the Human Relations Model. Increased community participation is offered as an indicator of effectiveness for community-based demonstration projects (Brownson, Riley, and Bruce, 1998; Citrin, 2001). Mizrahi and Rosenthal (2001) identified development of community support as an indicator of effectiveness, while several studies address the issues of good working relationships (Everett et al., 1996; Kimbrell, 2000).

The ability of the collaboration to obtain needed resources to continue operations or expand into new areas is captured by the Open Systems Model. Several papers have addressed the issue of the sustainability of collaborations (Altman, 1995; Fawcett et al., 1997; Zuckerman, Kaluzny, and Ricketts, 1995). Adaptability is another feature of the Open Systems Model; Zuckerman and colleagues (1995) note that collaborations are dynamic and can shift focus or activities to respond to external changes or opportunities.

3.3 Importance of Collaboration

The literature suggests that collaborative research is important in that collaboration is empowering and enabling, rather than simply advisory in nature (Hatch et al., 1993), and often results in win-win situations for all partners. Collaborative efforts, such as in community–academic partnerships, can yield positive outcomes for the study, the community, and the academic institutions involved. Collaboration enables progressive improvements for the design, delivery, and outcome of preventive interventions (Lynn, 2000;

Madison et al., 2000). Communities can benefit from improvements in the health status of its members and from knowledge gained and enhanced community capacity. Academic institutions often benefit from educating health professionals for the future, providing a stronger base for multidisciplinary practice and research on community minority health, preventive care, health promotion services research, and health policy analysis (Levine et al., 1994). For larger goals, such as improving health status and changing health behaviors within a community, the literature implies that collaboration among researchers, providers, CBOs, and target population members is imperative.

Despite recent progress, technology transfer of effective science-based HIV prevention interventions from research arenas to community settings has long been identified as a significant challenge in HIV prevention. Research-based intervention methods often do not present the level of detail or the methods needed for community providers of HIV prevention services to replicate the programs to meet local community needs or to tailor the program for diverse populations (Kelly, Somlai, et al. 2000). The authors assert that the likelihood of successful transfer of research-based HIV prevention technology will increase if during the planning phase researchers

- consider how interventions will be used in the field,
- obtain input from community members and service providers early on,
- test variations of interventions that may increase the intervention's applicability in realistic settings, and
- determine cost and effectiveness of intervention delivery.

The synergy created through such collaborative intervention development often facilitates technology transfer and implementation of interventions and can result in improved methodology, enhanced quality of data, and increased effectiveness of data dissemination (Altman, 1995; Jordan, Lee, and Shapiro, 2000).

Kelly, Somlai, and colleagues (2000) note that the dissemination of efforts will be most successful when it occurs in the context of ongoing relationships between researchers and service providers, and when technical assistance is followed by opportunities to plan

and devise solutions for implementation of research-based interventions. The synergistic effect from collaborative arrangements (such as alliances) transcends existing organizational arrangements, links organizations through shared strategic purposes, permits activities not otherwise possible, provides access to technology that was previously unavailable, and capitalizes on the growing need for organizational interdependence (Zuckerman, Kaluzny, and Ricketts, 1995). As a result, the collaborative efforts of HIV prevention researchers, service providers, and community members often yield development of research-based interventions that are not only effective but can also be successfully implemented under realistic conditions in applied settings, thereby enabling technology transfer goals to be achieved more successfully (Kelly, Heckman, et al., 2000).

Community-based partnerships recognize that public health problems are by nature the community's problems and that local organizations have insight, experience, and problem-solving skills that are invaluable to collaborative research (Citrin, 2001; Kelly, Heckman, et al., 2000). Using this theory as a basis for action, each partner is viewed as participating in a mutually beneficial partnership where each shares resources, expertise, commitment, and perspectives. Each partner makes the long-term investment for their mutual and continuing benefit and ultimately enhances the community's ability to define and address its public health problems while at the same time, striving for the shared goal of improving the community's health (Citrin, 2001). Research partnerships with the community are a feasible means of enabling researchers to enter research arenas that would otherwise be closed. They also provide communities with access to resources, ideas, and approaches that are needed to allow them to better serve their constituencies, and are relevant vehicles for addressing continuing gaps in morbidity and mortality in underserved minority populations (Levine et al., 1994; Schensul, 1999). Sullivan and colleagues (2001) note that "creating effective, genuine partnerships between communities and researchers will produce research intervention strategies that are more meaningful and applicable to people's lives. Such strategies will ultimately make important contributions to improving the public's health" (p. 147). Furthermore, effective coalition, partnership, and

constituency building is essential to the future of public health (Kimbrell, 2000).

3.3.1 Types of Collaboration

There are several types of collaborative arrangements:

- CBO–Academic partnerships
- Target Community–Academic partnerships
- CBO–Target Community–Academic partnerships
- Provider–Researcher partnerships
- Public–Private partnerships
- Public Health/Medical Provider partnerships
- Resource–Collaborator partnerships

CBO-Academic partnerships enable CBOs and academic institutions to work together to accomplish a common goal or shared vision. For example, researchers from Wake Forest University School of Medicine and UNC-Chapel Hill partnered with the North Carolina Farmworker's Project to investigate migrant and seasonal farmworker exposure to pesticides and to develop effective interventions to reduce pesticide exposure in North Carolina (Quandt, Arcury, and Pell, 2001).

In *Target Community-Academic partnerships* (a common type of community–academic partnership), researchers obtain input from individual members of the target population and may involve target population members in various phases of research over the course of the project. Researchers from the University of Illinois at Chicago and community members consisting of parents and school staff of urban, African-American youths partnered to develop a family-based, longitudinal HIV prevention program aimed at African-American fourth- and fifth-grade children living in urban areas with high rates of HIV infection (Madison et al., 2000; McCormick et al., 2000).

Collaboration among all three parties also frequently occurs, forming a *CBO-Target Community-Academic partnership*. Harper and Carver (1999) cite the Youth Action Project (YAP) as an example of such a partnership. YAP was formed by Tri-City Health Center and university-based researchers as part of the Center for AIDS Prevention Studies' Collaboration Program. Adolescents from

the target population, Tri-County Health Center, and university-based researchers worked together to make YAP a successful program that documented the existence of high-risk, underserved youth in a suburban area and provided needed HIV prevention education to this vulnerable population. Other examples include a collaboration among residents of an economically-disadvantaged Minneapolis neighborhood, researchers from the University of Minnesota, representatives of local nonprofits, and representatives of city and state health departments to educate community residents about lead burden (Jordan, Lee, and Shapiro, 2000); and Neighborhood Solutions, a collaboration among the South Carolina Department of Health and Human Services, the Family Services Research Center at the Medical University of South Carolina, and the neigborhood of Urban Heights to assess violent criminal behavior, substance abuse, and other youth antisocial behavior, while maintaining youths in the neighborhood (Randall, Swenson, and Henggeler, 1999).

Provider–researcher collaboration is also common. Providers can be found in both the public (e.g., state and local health departments) and private (e.g., private CBOs) sectors. McWilliam and colleagues (1997) describe a collaboration among researchers from the University of Western Ontario, the Oxford Home Care Program, and the Middlesex-London Home Care Program to examine the transition experiences of older patients discharged from hospital to home care. They also tested models of health promotion and case management in an effort to develop more cost-effective, comprehensive, and more easily accessible care management during such transitions. Another such collaborative effort is the Collaborative Home Care Project in which researchers at a midwestern university and nurse clinicians tested the effectiveness of case management strategies with HIV-infected patients who receive home care (Salsberry, Nickel, and O'Connell, 1991). Collaboration between providers and researchers is often especially important in conducting women's prevention that is holistic, gender-sensitive, and responsive to communities (Klein, Williams, and Witbrodt, 1999). Furthermore, collaboration between researchers and prevention program providers is imperative in developing interventions that can be feasibly implemented in realistic settings (Kone et al., 2000).

Public-private partnerships, such as those described by Bazzoli et al. (1997), represent a diverse array of public and private sector institutions including private health providers, public health departments, human service agencies, local government, educational institutions, managed care organizations, and business coalitions. The authors suggest that the collaboration between local coalitions and delivery networks is crucial to goal advancement. Local coalitions provide a forum for community health needs assessment and the assurance of accountability while delivery network participants restructure service delivery and enhance cost-effectiveness to meet objectives identified by the coalition.

The Partnership for Healthy Communities is an example of a *public health/medical provider partnership* between three major hospitals in New York State and a federally-qualified community health center. Formal partnership agreements enabled pediatric and obstetric patients to be transferred from the health department to health care providers participating in the partnership. This assured the provision of medical care to Medicaid and uninsured children and pregnant women. In addition, public health nurses were assigned to the medical offices of the partners to provide enabling services including home visits, case management, health education, and other support services to ensure that primary and preventive health care services were provided to Medicaid and medically underserved patients (Crucetti, 2000).

Finally, in *resource-collaborator partnerships,* experts and nonexperts engage in a reciprocal process in which all participants acknowledge their own and each other's resources and limitations, share resources, and recognize common gains. Both have their own unique views to offer and maintain equal status in defining the terms and meaning of the relationship. Additionally, meaningful change results for all parties involved (Tyler, Pargament, and Gatz, 1983). Tyler (1994) asserts that in resource-collaborator relationships, all participants may develop a high level of involvement and develop greater competence over the course of the study. As a result, leaders and other involved parties (subjects, project staff, contributors, etc.) can learn from each other and support the value of collaboration.

A typology originally developed in agricultural research that defines various levels of community participation in research may also be applied to HIV prevention research using the following categories of participation: contract, consultative, collaborative, and collegiate, with each level indicating an increasing degree of community participation. A *contract* level of participation occurs when scientists contract (formally or informally) with third parties to provide services. CBO-Academic partnerships, Provider-Researcher partnerships, and Public-Private Partnerships are all collaborative arrangements that may fall under this category. This level of participation might occur where a "contract" exists between researchers and a CBO or target population to participate in the research project (Seeley, Kengeya-Kayondo, and Mulder, 1992). A CBO-Academic partnership that engaged in this level of participation is described by Kelly, Somlai, and colleagues (2000) in which researchers at the Center for AIDS Intervention Research (CAIR) at the Medical College of Wisconsin conducted structured interviews with 74 AIDS Services Organizations (ASOs), randomized them, and provided the ASOs with technical assistance manuals; manuals plus a staff training workshop; or manuals, the workshop, and follow-up consultation phone calls. The ASOs carried out the interventions and provided regular updates to the research staff. Subsequent comparison and analysis of the effectiveness of the three dissemination strategies for the transfer of HIV prevention models from the research arena to applied community settings were conducted by the research staff.

The *consultative* level of participation occurs when scientists consult third parties about their problems and then develop solutions. In the case of the Medical Research Council Programme on AIDS in Uganda, members of the local community served as field office staff and provided feedback on questionnaire content and the impact of the study (Seeley, Kengeya-Kayondo, and Mulder, 1992). Collaborative arrangements that may be categorized under the consultative level of participation include CBO-Academic partnerships, Target Community-Academic partnerships, CBO-Target Community-Academic partnerships, Provider-Researcher partnerships, Public-Private partnerships, and Public Health/Medical Provider partnerships.

A *collaborative* level of participation occurs when scientists and third parties collaborate as partners in the research process. This may include all collaborative arrangements: CBO-Academic partnerships, Target Community-Academic partnerships, CBO-Target Community-Academic partnerships, Provider-Researchers, Public-Private, Public Health/Medical Provider, and Resource-Collaborator Partnerships. The East Side Village Health Workers Partnership is an example of the collaborative level of participation. The partnership was comprised of representatives from the local health department, hospitals, CBOs, citizen action groups, and university-based researchers and involved a participatory action research process where all parties were involved in collecting, interpreting, and applying community information to address issues relating to the health of women and children in Detroit, Michigan (Schulz et al., 1998). The collaborative efforts of a health center, university-based researchers, and members of the target population to develop the YAP, which investigated successful strategies to engage high-risk youths in an HIV prevention programs, is another example of the collaborative level of participation. Harper and Carver (1999) cited numerous benefits of the collaboration, including population-specific modifications of research methodology and instruments, recruitment of hard-to-reach youths, greater ease in tracking participants, and increased project acceptability and credibility.

Seeley's typology also discusses the *collegiate* level of participation. This level of the typology does not appear to have been addressed in other research and, as it was developed for underdeveloped rural areas, is of limited generalizability.

The typology presented above describes multiple levels of participation, each of which is distinguished by differing objectives and organizational managerial arrangements (Seeley, Kengeya-Kayondo, and Mulder, 1992). With the evolving view in recent years that CBOs and target population members should be involved in all phases of research, previous notions of the traditional distance and barriers between the subject and practitioner/researcher have dissipated to a large extent, and many collaborations have begun to recognize CBOs and members of the target population as full and equal partners. The typology may be useful in categorizing collaborative arrangements for comparison

and analysis to determine if greater levels of involvement and participation of all parties do indeed contribute to more effective collaborations. By classifying collaborations in this way, we may be better able to identify common factors within each classification that differentiate successful collaborations from those that do not achieve desired results.

In delving deeper into CBO–Academic, Target Community–Academic, and CBO–Target Community–Academic collaborations, several models or types of research have been delineated. The first type of research occurs where the academic researcher is the sole inquirer, determines the questions to be asked, and defines the range of acceptable answers. The researcher consults key leaders of human services organizations that provide services to the community being studied or key members of the target population for advice and consent. While this constitutes community-based research, it does not achieve optimal involvement of the community since community representatives and residents have no influence on research design and remain largely unaware of the purpose of the research.

The second type of research design is more reactive in that it is created in response to the needs and input of community-based agencies and other community representatives. Academic researchers identify influential people within the community, explain the research design, and request cooperation. In this model, non-academicians assist in defining questions, but academicians still define the methodology for inquiry and the range of acceptable answers.

The third model entails the development of interactive research practices that involve both academic researchers and the community (CBOs and/or members of the target community) as equal partners in all phases of the project. Together, all parties define the research questions, determine how to obtain the desired information, and decide what to do with the gathered information (Baker et al., 1999; Hatch et al., 1993).

Inherent to the involvement of communities in collaborative research efforts is the importance of including members of the target population in all phases of the research project. The role of target community members should not be restricted to intervention

design, but should also be expanded to include participant recruitment, data collection, and intervention implementation and the importance of listening to their input should not be overestimated (Sormanti et al., 2001). The literature suggests that processes that engage community members in designing research questions, collecting and interpreting data, and determining the uses of information in community change efforts can make valuable contributions to scientific literature and to the social resources available to residents of disenfranchised communities (Schulz et al., 1998). Members of the target population are often more aware of and better understand the complexities, risks, and issues of the community than do academic researchers. This can result in more precise theory development and increase the likelihood that interventions are culturally sensitive and appropriate (Baker et al., 1999). Direct input and participation of members of the target population is important for researchers to examine how behavioral HIV risk reduction interventions will be used by community HIV service providers to ensure that interventions remain effective under realistic conditions. Having the input of members of the target population is particularly useful in adaptation where CBOs and community members can draw from their familiarity with the culture, needs, preferences, and risk issues of the community (Kelly, Heckman et al., 2000). It is also important for research that is sensitive or the motives of which can be called into question by the community. Participation of members of the target population is also important if the research is to be carried out for an extended period of time (Seeley, Kengeya-Kayondo, and Mulder, 1992). Furthermore, active involvement of service providers and members of the target population may result in more rapid technology transfer and greater efficiency during the transfer stage (Kelly, Heckman, et al., 2000).

3.3.2 Key Partners

Collaborations to develop behavioral interventions to prevent HIV infection are comprised of numerous key partners, and various authors have argued for the inclusion of an assortment of partners. Kelly, Sogolow, and Neumann (2000) state that the prevention of new HIV infections can only be achieved through effective information exchange among service providers, researchers, and policy makers. The authors further state that researchers should

obtain input from service providers and community members early in the development process to gain acceptance in the community, help to ensure the intervention's cultural appropriateness, and increase its likelihood of success when implemented in different settings. Similarly, Madison et al. (2000) and Brownson et al. (1998) assert that truly meaningful collaboration must entail the involvement of influential community members as active partners with researchers in the direction, design, implementation, interpretation, and dissemination of the research and the intervention itself (Madison et al., 2000; Brownson, Riley, and Bruce, 1998). Sormanti et al. (2001) agree, stating that the role of target community members should not be limited to intervention design but should be expanded to include participant recruitment, data collection, and intervention implementation (Sormanti et al., 2001). In addition to valuing community contributions, the literature also states that research projects should make a conscious effort to recruit and train minorities to participate in research teams. Involving minorities in research is important for increasing the cultural competence of research teams and for providing opportunities for training and skill building for members of communities of color (Kone et al., 2000). Other key partners in collaboration include public health agencies, funders, and private foundations and corporations.

3.4 Evidence of the Impacts of Collaboration

Collaborative action through community partnerships often serves as a catalyst, inspiring partners to take action to bring about changes in programs, policies, and practices throughout the community. The changes reshape community agencies and institutions and may allow them to better address the issues of concern (Fawcett et al., 1995). Citrin (2001) notes that research, teaching, learning, public health practices, and the work of CBOs can all be strengthened through community-academic-practice partnerships in which all partners share expertise and play equal and complementary roles in designing and implementing interventions, as well as teaching and conducting research. Collaborative research partnerships can also weaken many access and institutional barriers to HIV intervention research, such as access to hard-to-reach populations and successful transfer and adaptation of interventions from the research arena to the

community setting (Grinstead, Zack, and Faigeles, 1999). Additionally, by engaging partners in all phases of the project from conceptualization of the project through seeking funds, research program design, and data collection and interpretation, true innovation can be achieved. This type of collaboration alters not only the way questions are asked but also affects the nature of programs that are developed and the nature of the questions themselves, thereby enabling innovation to occur in the basic science of HIV prevention.

Numerous studies cite a wide range of benefits of collaborative approaches. Some focus on health improvements, demonstrating a reduction in risk factors (hypertension, hypercholesterolemia, and obesity), altered health behaviors of residents (smoking, physical inactivity, unprotected sex, voluntary HIV testing) (Brownson, Riley, and Bruce, 1998; Cotrell and Ciaramitaro, 1993; Grinstead, Zack, and Faigeles, 1999), and improvement in health status (Levine et al., 1994). Other studies have associated collaboration with greater access to "hard-to-reach" populations (Grinstead, Zack, and Faigeles, 1999); improvements in the perception of job satisfaction, absenteeism, staff attitudes, and study participation rates (LeGris et al., 2000); and broad dissemination of curriculum covering HIV information, safety skills, child development, parent-child communication, and negotiation and transfer of skills pertaining to safe and sensitive socializing with persons with HIV (Tiffany, 1999).

Studies also suggest that collaboration may have additional positive impacts. For example, a case study of collaboration between the University of Michigan School of Public Health (UMSPH), local health departments, and several community-based agencies as part of the Community-Based Public Health Initiative, resulted in a number of continuing partnerships even after the initiative was complete. Furthermore, several major components of the initiative became permanent features of USMPH including the formation of a Community-Based Public Health Committee and Office of Community-Based Public Health and the establishment of community-based research principles and participatory research centers (Citrin, 2001). A case study of the Project Freedom community coalition found that a high level of community mobilization was sustained for more than 2 years and that after a lag period, most increases in community actions resulted in

community changes. The findings reveal that community changes—including program, policy, and practice modification—may have been responsible for improvements in community-level indicators and suggest that community change may be an important early predictor and intermediate outcome of the eventual impact of coalitions (Fawcett et al., 1997).

In addition to sustained partnerships and positive changes in the community, Hearst and colleagues (1995) documented an increase in the quantity and quality of collaborative research projects following the annual 10-week intense learning and collaborative sessions between researchers at the Center for AIDS Prevention studies and international HIV/AIDS researchers. Over time, a number of program alumni have established successful HIV prevention programs in their own countries, assumed leadership positions in AIDS control, and obtained funding for additional AIDS prevention research projects.

3.5 The Process of Collaboration Formation

The literature provides a great deal of information about the process of initiating and maintaining collaborations. In this section, we identify factors that are critical to the longevity and effectiveness of collaborations and several barriers and challenges that can erode collaboration.

Organizing an effective, meaningful collaboration requires the involvement of all parties from the start of a project (Baker et al., 1999; Crucetti, 2000; Hatch et al., 1993; Hunter et al., 1998; Israel et al., 1998; Lynn, 2000; Schulz et al., 1998; Sormanti et al., 2001). Ideally, collaborations between organizations should be developed prior to the beginning of a research project (Lynn, 2000). Early participation by CBOs and target population members in health research studies provides direction and focus for a project and builds a sense of ownership among all parties (Hatch et al., 1993). Close collaboration between researchers and CBOs during the development of an intervention helps to ensure that the intervention is both feasible and compelling for implementation by service organizations after the initial research has been completed (Hunter et al., 1998).

When deciding whether to initiate a collaboration, each organization should reflect on its own as well as its potential

partner's areas of expertise, resources, and strategic goals (Tyler, 1994; Zuckerman, Kaluzny, and Ricketts, 1995; McWilliam, Desai, and Greig, 1997). Ideally, collaborating partners should "share common or compatible cultures and similar approaches to issues or problems" (Zuckerman, Kaluzny, and Ricketts, 1995). Hatch et al. (1993) note that "finding common ground for establishing relationships between researchers and communities can increase the relevance of research" (p. 27). Partners should assess the motivation to enter into a collaboration (Zuckerman, Kaluzny, and Ricketts, 1995). Collaborations are intended to benefit all partners; therefore, understanding what each partner hopes to gain from their participation is critical to ensuring a mutually beneficial relationship (Zuckerman, Kaluzny, and Ricketts, 1995).

To increase the chance for an effective collaborative relationship, partners should have a shared vision of what the collaboration will look like in addition to what the common goals will be (Mays, Halverson, and Kaluzny, 1998; McWilliam, Desai, and Greig, 1997). Commitment is needed from all parties; to achieve the common goals, as well as to the collaborative model as a way to achieve these goals (Mizrahi and Rosenthal, 2001; Bazzoli et al., 1997). In part, this commitment will be motivated by mutual need (Zuckerman, Kaluzny, and Ricketts, 1995).

A great deal of foresight, planning, and assessment is needed prior to entering a collaboration. Partners should be clear about the motivation, goals, and commitment that they bring to the relationship. Underestimating the importance of common goals will ultimately lead to dissatisfaction and frustration with the process and may cause an abrupt or premature end to the collaboration (LeGris et al., 2000; Mitchell and Shortell, 2000). Clark (1999) cited the "expectation gap" as one factor that prevents effective collaboration between CBOs and researchers. This gap is created when the practical needs of operating in a real world setting conflict with the researchers' demand for scientific rigor (Clark, 1999). This expectation gap can contribute to researcher reluctance to participate in collaboration (Everett et al., 1996). Similarly, practitioner frustration with the lengthy scientific method can create conflict (Jordan, Lee, and Shapiro, 2000). Bringing all partners together early in the development process can help to minimize these problems (Altman, 1995).

Although having common goals is a vitally important factor in creating effective collaborations, being culturally sensitive and acknowledging diversity is also critical to the success of collaboration. Participation of community members early in the process helps to create culturally sensitive interventions that are relevant to local norms and values and well suited to the given environment (Baldwin et al., 1999; Kelly, Sogolow, and Neumann, 2000). Effective collaborations should support cultural diversity as a way to fully realize the benefits of the collaborative process. In addition to ensuring that interventions are culturally sensitive and appropriate, supporting cultural diversity can empower community participants (Cottrell and Ciaramitaro, 1993). A key principle of community-based research is the promotion of a co-learning and empowering process that attends to social inequalities (Israel et al., 1998). To achieve this principle, collaborations should actively recruit and train individuals from many different community segments (Kone et al., 2000; Quandt, Arcury, and Pell, 2001). Identifying key community members is also important to building effective collaborations (Israel et al., 1998).

As a matter of course, collaborative partners need to carefully assess their areas of expertise and "clearly and repeatedly define agency roles and responsibilities" (Schensul, 1999; McWilliam, Desai, and Greig, 1997). Diversity is best served when partners bring their strongest assets to the table and apply these strengths to the appropriate collaborative role. Clear and distinct roles are important in building excellent working relationships (Everett et al., 1996). Additionally, defining roles early in the process acknowledges each partner's expertise and supports the idea that each partner plays an important role in the collaboration (Klein, Williams, and Witbrodt, 1999). Salsberry, Nickell, and O'Connell (1991) recommend proceeding to the level of developing clear job descriptions and distributing to all partners. When participating in community research, defined roles can also help in understanding the empowerment process, which in turn can benefit outcomes by increasing the efficiency and output of the collaboration (Fawcett et al., 1995).

Clearly defined roles can also avoid challenging situations. In some cases, individual partners in a given community may come to see researchers as "honorary" community members and encourage

them to participate in a number of sociopolitical causes unrelated to the research topic, creating time and boundary issues for the researcher; thus, "researchers need to be clear about the limits of these commitments" (Jordan et al., 2000, p. 738). Clarity in the beginning of the collaboration can effectively avoid misunderstandings and hurt feelings later in a project.

3.6 Ongoing Considerations

The most critical ongoing consideration for collaboration effectiveness is providing adequate time and resources to support the collaboration (Sanstad et al., 1999; Schensul, 1999). Effectively participating in a meaningful collaboration requires the partners' ability to develop relationships based on mutual trust and respect (Baker et al., 1999). Trust is the foundation of effective collaborations (Zuckerman, Kaluzny, and Ricketts, 1995). Building trust and respect require a significant time commitment, especially at the beginning of a project (Baker et al., 1999). Prior history of working relationships between partners helps to establish and maintain community-based research collaborations by capitalizing on existing trust built during previous projects (Israel et al., 1998). Zuckerman, Kaluzny, and Ricketts (1995) recommend viewing collaborations as long-term investments where all partners' will be rewarded equally over time. When this ideal is met, partners leave the collaboration satisfied and open to new opportunities working together.

Resources—in the form of monetary support, individual expertise, information, and contacts—are essential in developing and maintaining collaborations (Mizrahi and Rosenthal, 2001). Sustainability of the collaboration requires sufficient financial and in-kind resources (Altman, 1995). Ensuring that the collaboration has stable leadership that provides for shared power is also important to avoiding conflicts over control of funding and lines of authority (Sullivan et al., 2001; Zuckerman, Kaluzny, and Ricketts, 1995; Brownson, Riley, and Bruce, 1998). When approaching issues of collaboration leadership, CBOs should be viewed as equal partners in the development and implementation of interventions (Wheeler, 1999). This shared power serves to recognize the importance of all partners and allows all partners to benefit from the collaboration.

Another factor critical to maintaining successful collaborations is effective, open communication (Sullivan et al., 2001). "Effective" communication incorporates several different, yet related aspects. Partners should openly discuss the motivation for participating in the collaboration (McWilliam, Desai, and Greig, 1997). Additionally, partners should jointly develop an explicit statement of common goals and restate these goals often (Brownson, Riley, and Bruce, 1998). Frequent communication among all partners is critical (Brownson, Riley, and Bruce, 1998; Everett et al., 1996). Efficient dissemination of research findings and knowledge to all partners is important in maintaining shared power as well as commitment to the collaboration (Israel et al., 1998). Effective information exchange among CBOs, researchers, and policy makers also helps to achieve public health objectives (Kelly, Sogolow, and Neumann, 2000). Communication with entities outside the collaboration, such as governmental, municipal, and community leaders, is also frequently required to meet the goals of the collaboration (Crucetti, 2000). Collaboration partners' failure to effectively communicate and a lack of shared language can become a barrier to attaining common goals (Clark, 1999). Without effective, open communication, partners run the risk of fracturing relationships, losing sight of common goals, and eroding motivation and commitment to the collaboration.

Evaluation of public health initiatives is critical to measuring the effectiveness of interventions and to furthering the science of public health research. Evaluating collaborations is important for similar reasons. Collaboration successes and achievements should be celebrated regularly, regardless of their size or importance, as a way of promoting excitement about the collaboration and bolstering commitment to the process (Cottrell and Ciaramitaro, 1993). Providing measurable results that are communicated with all partners in addition to outside stakeholders is critical to long-term collaboration sustainability (Mitchell and Shortell, 2000). However, evaluating collaborations can be challenging. The effects of collaborations are often delayed, sometimes by several years, and these delays can prevent timely acknowledgement of measurable benefits, a factor that may adversely affect collaboration funding (Fawcett et al., 1997). Additionally, it can be difficult to establish links between collaboration activities and specific outcomes because broader environmental factors may blur

collaboration effects and because suitable comparison groups are difficult to define and identify (Fawcett et al., 1997). Because of these challenges, few collaborations have been systematically evaluated (Lynn, 2000). However, ideally, a comprehensive evaluation strategy should be developed prior to beginning a project (Mays, Halverson, and Kaluzny, 1998).

Evaluation strategies should be tailored to the type and scope of the collaborations (Baker et al., 1999). Ongoing feedback from participants is needed to efficiently address issues and concerns that arise (Baldwin et al., 1999). Partners should keep in mind that evaluation of collaborations requires time and resources to complete. Collaborative partners should plan for the additional time and resources to evaluate their work and their working relationships (Brownson, Riley, and Bruce, 1998).

A final characteristic of effective collaborations is the ability to remain flexible (Sanstad et al., 1999). This flexibility is needed to respond to changes from within the collaboration and from the external environment. At times, partners need to be able to look past the details involved in sustaining a collaboration and focus on the bigger picture (Cottrell and Ciaramitaro, 1993). Flexible, dynamic collaborations can effectively incorporate the changing needs of partners and larger public health priorities while avoiding becoming mired in the frustrating minutia that often arises from interorganizational collaborations.

4. POLICY IMPLICATIONS

Citrin (2001) highlights the importance of a thorough awareness of community contexts in all their complexity to ensure that research is well-founded, that teaching is relevant, and that interventions are successful. For this reason, "multi-factorial and ecological approaches" to understanding the determinants of health and disease are critical to achieving improved public health priorities (Clark, 1999). Collaborations between researchers and CBOs are ideal vehicles to gain this level of understanding (Citrin, 2001). Collaborations among researchers, CBOs, and community members help to enhance the relevancy of health research initiatives for the communities where they are located (Levine et al., 1994). Because of these important contributions, collaborations should become

standard practice when addressing major health care and related social, economic, and environmental issues (Levine et al., 1994).

The full benefits of collaborations could be better understood with additional evaluation that includes effects on community outcomes and the systematic exploration of the process partners go through when designing and implementing interventions (Madison et al., 2000). Additional longitudinal study of collaborative efforts is needed to understand how collaborations operate and sustain themselves and techniques that partners use to engage the community and give it a voice (Bazzoli et al., 1997). However, as evaluations of collaborations increase in number, it is important for funders, public health organizations, and collaboration participants to understand that the full benefits of the initiative may not become apparent for several years (Brownson, Riley, and Bruce, 1998).

As stated earlier, evaluating collaborations is a complex and time-consuming process. Additional time and funding should be available to support these new initiatives (Ferreira-Pinto and Ramos, 1995; Israel et al., 1998; Neumann, Sogolow, and Holtgrave, 2000). Altman (1995) suggests using revenues from increases in alcohol and tobacco taxes to fund long-term community interventions that involve collaborations. Regardless of the specific source of funds, government agencies and funding institutions need to alter their traditional methods of funding to adequately respond to the increased time and resource requirements of collaborations (Israel et al., 1998). Given that a key component to collaboration funding is ensuring sustainability, the traditional funding model of supplying time limited funds for a project that has a distinct beginning and end should be reconsidered (Jordan, Lee, and Shapiro, 2000). Additional training and studies on leadership development may serve to benefit interagency collaborations (LeGris et al., 2000). The empowerment process should become a key component of the leadership training provided to program directors and CBO staff members (Cottrell and Ciaramitaro, 1993).

Collaborations help to ensure that research and interventions are relevant, meaningful, and culturally appropriate (Sullivan et al., 2001). Because of the important benefits of collaborations, academic health institutions should increase education and training in community research and collaboration building for their students

and faculty (Levine et al., 1994). This comprehensive training should include how to initiate, sustain, and evaluate collaborations while optimizing the benefits collaborations can provide. Diversity is critical to optimizing the benefits of collaboration. Additional scholarships and funding should be made available to minority students to increase the number of well-trained ethnically and racial diverse researchers (Baldwin et al., 1999). Additional effort should also be made to increase and support female leadership (Hatch et al., 1993).

Interventions developed through collaboration benefit from the divergent expertise and perspectives that partners bring to the relationship. However, the added complexity of beginning, sustaining, and evaluating collaboration will require innovative ways to address role definition within and across agencies as well as new funding mechanisms that can adequately provide for different, changing needs.

5. CONCLUSION

The research on community collaboration is rich and complex. It offers useful insights into the value of collaboration, the impacts (both potential and realized) of collaboration, and lessons learned on the process of collaboration.

The foregoing review has been a relatively broad inquiry; future studies would do well to narrow the scope somewhat. We have included a broad range of collaboration types in our inquiry. It remains to be seen whether those types are more alike than different. For example, do the commonalities outweigh the differences between CBO–researcher collaborations and target community–researcher collaborations?

A related issue has to do with the extent to which HIV prevention collaborations can learn from other community collaborations addressing other issues. Are there unique aspects to HIV prevention, and the kinds of collaborations that emerge to address it, that limit the extent to which we can generalize from other issue areas?

Most of the studies reviewed assumed that the research partner would be from an academic institution. Researchers may be found

in other settings (e.g., public sector, private research organizations); do the same patterns and considerations hold for non-academic researchers?

Further definition and operationalization of "community" in the research on collaboration would be useful. Many analysts equate the involvement of key individuals from the target population with community involvement. Research on the extent to which community leaders truly represent their communities would provide useful insights to those examining community collaborations.

Finally, rigorous research on the impacts of collaboration would contribute significantly to the field. Many papers assume that interventions developed through community collaboration will yield better HIV prevention products—interventions that are more feasible, acceptable, effective and sustainable than those developed by either researchers alone or CBOs alone. This proposition has a strong theoretical foundation but has not yet been tested empirically.

Another challenge inherent in addressing the outcomes of collaborative endeavors is designing an evaluation with a feasible comparison group. Comparisons of the relative impact of different types of collaborations would also be valuable. Axes for comparison might include funding source and flow (e.g., from researcher to community partner or vice versa), locus of authority, formality of bonds between partners, and so on.

6. REFERENCES

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