

**DEVELOPING AND SUSTAINING COMMUNITY-UNIVERSITY PARTNERSHIPS
FOR HEALTH RESEARCH:
INFRASTRUCTURE REQUIREMENTS**

**A Report to the NIH Office of Behavioral and Social Sciences Research
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**Authored by Sarena D. Seifer, Nancy Shore, and Stacy L. Holmes
Community-Campus Partnerships for Health
UW Box 354809 ~ Seattle, WA 98195-4809
Tel. 206-616-3472 ~ ccphuw@u.washington.edu ~ www.ccph.info**



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EXECUTIVE SUMMARY

In recent years, national organizations, funding agencies and researchers have called for a renewed focus on an approach to health research that recognizes the importance of social, political and economic systems to health behaviors and outcomes. Much of the research that has sought to gain a better understanding of the social and physical determinants of health has considered individuals and communities as passive “subjects”, rather than as partners in the research process. Increasingly, however, attention is being paid to the contributions that community-university research partnerships can make to new knowledge and to the translation of research findings into practice and policy. Research that involves partnerships between communities and universities has become central to the national prevention research agenda.

Although there is a growing literature about community-university partnerships for research, questions remain about the infrastructure required to develop and sustain these partnerships. For the purpose of this paper, infrastructure is defined as the sum of those elements that are essential and/or required to support activity leading to successful research processes and outcomes. For example, what community structures, processes and policies are required to conduct such research? What university structures, processes and policies are required? What faculty, staff and volunteer roles, expertise and experience are required? The literature on infrastructure for research in general (e.g., not specifically about community-university research partnerships) is sparse and points to the need for additional studies to further specify those infrastructure elements that foster effective and productive research.

In 2001, the National Institutes of Health (NIH) Office of Behavioral and Social Sciences Research commissioned Community-Campus Partnerships for Health (CCPH) to draft a report on the infrastructure required to develop and sustain community-university partnerships for health research. The purpose of this report is two-fold:

- To inform the development of possible NIH-sponsored initiatives
- To contribute to our knowledge about community-university partnerships for health research

In writing the report, we drew on two sources of information:

- A study recently conducted by CCPH that included telephone interviews with principal investigators, project managers, community partners and funding agency program officers who are involved in community-university partnerships for health research. The study was approved by the University of Washington’s Institutional Review Board and the interviews were designed, conducted and analyzed by CCPH staff using non-federal funds.
- A focused synthesis of recently published literature, conference proceedings and other publicly available information on or about community-university partnerships for health research.

The paper identifies nine critical issues that affect the infrastructure required for community-university research partnerships and, consequently, the future of the field. Attention to these issues is critical in order to provide the necessary support for both academic and community partners.

1. Community-based research, and community-based participatory research in particular, is often viewed by the academic community as inferior to other forms of research or not even as research.
2. The process of developing and sustaining partnerships is not often valued and recognized by the funding and academic communities as an essential part of the methodology of community-based research. This process takes time and is significantly strengthened by having a permanent staff person who serves as a community-academic liaison for the partnership.
3. Funding mechanisms, policies and procedures are often biased against community-university research partnerships. This bias can be implicit or explicit and may be inadvertent, but is a concern nevertheless.
4. Limited numbers and types of academic institutions are pursuing community-university research partnerships.
5. More barriers than incentives exist for community-based organizations to engage in community-university research partnerships. The imbalance of control of power and resources between communities and universities can undermine the sustainability and significance of community-university partnerships for research.
6. Conducting community-based research requires a team with a unique set of knowledge, attitudes, values and competencies that need to be cultivated and supported.
7. Although pursuing applied research by their very nature, community-university research partnerships do not consistently disseminate their findings for practical application.
8. There is no coordinated educational and advocacy effort on behalf of community-university research partnerships, nor is there a readily accessible “one stop” source of information on these partnerships.
9. There are important unanswered questions about the infrastructure requirements of community-university research partnerships that can form the basis of future research.

The paper concludes with a series of recommendations intended to address each of these nine critical issues, including an ideal job description for the critical community-academic liaison position (see p. 43). Although this report has been written for the NIH Office of Behavioral and Social Sciences Research, we are not suggesting that all of these recommendations can or should be implemented by NIH. However, we believe that NIH can play a significant role in advancing some of these recommendations, by either serving as the lead agency or convening other key stakeholders to take action.

The recommendations that may be of particular interest to NIH include those listed below. Please refer to the page numbers in parentheses for more detailed action steps that correspond with each recommendation.

- Provide funding support for planning, partnership development, partnership evaluation and dissemination as an essential part of the methodology of community-university research partnerships (p. 34 & p. 40).
- Design funding initiatives that require evidence of genuine community partnerships and that address community-identified research priorities (p. 35-36 & p. 38).
- Recruit and prepare reviewers to competently review proposals for community-university research partnerships (p. 36).
- Facilitate the ability of community-based organizations to recoup their research-related expenses and/or be the fiscal agent for research grants (p. 37-38).
- Invest in the preparation of researchers who have the knowledge, attitudes, values and competencies to successfully conduct community-based research (p. 39).

ACRONYMS USED IN THIS REPORT

AHRQ	Agency for Healthcare Research and Quality
CAB	Community Advisory Board
CBPR	Community-Based Participatory Research
CCPH	Community-Campus Partnerships for Health
CDC	Centers for Disease Control and Prevention
CHSP	Community Health Scholars Program
IRB	Institutional Review Board
NCI	National Cancer Institute
NIEHS	National Institute of Environmental Health Sciences
NIH	National Institutes of Health
NINR	National Institute of Nursing Research
PRC	Prevention Research Center
SPN	Special Population Networks
URC	Urban Research Center

BACKGROUND ON THE PROJECT

In recent years, national organizations, funding agencies and researchers have called for a renewed focus on an approach to health research that recognizes the importance of social, political and economic systems to health behaviors and outcomes. Much of the research that has sought to gain a better understanding of the social and physical determinants of health has considered individuals and communities as passive “subjects”, rather than as partners in the research process (Israel 1998, Israel 2000, Krieger 2002, Schultz 2002). Increasingly, however, attention is being paid to the contributions that community-university research partnerships can make to new knowledge and to the translation of research findings into practice and policy (Green and Mercer 2001, Israel 1998, Israel 2000, Schultz 2002, Themba 2002) Research that involves partnerships between communities and universities has become central to the national prevention research agenda (AHRQ 2001, CDC 2000, Green and Mercer 2001, O’Fallon 2002).

The benefits of community-university research partnerships have been described in recent review articles and conference reports (AHRQ 2001, Israel 1998, Israel 2000, NINR 2001, O’Fallon 2002). These include:

- Overcoming the fragmentation and separation of individual from culture and context that are often evident in more narrowly defined, categorical research approaches;
- Establishing trust between communities and researchers;
- Improving the quality and validity of research by engaging local knowledge and local theory based on the experience of people involved;
- Enhancing the relevance of the research question, the quality and quantity of data gathered, and the relevance and use of the data;
- Facilitating the development and implementation of more effective public health interventions, including policy change;
- Joining partners with diverse skills, knowledge, expertise and sensitivities to address complex problems, including researchers from different disciplines and professions;
- Providing resources and possible employment opportunities for the communities involved;
- Ultimately, improving the health and well-being of communities involved, directly through studying and addressing important community needs, and indirectly through increasing their power and control over the research process; and
- Recognizing existing community resources and building community capacity to identify and conduct research.

Although there is a growing literature about community-university partnerships for research, questions remain about the infrastructure required to develop and sustain these partnerships. For example, what community structures, processes and policies are required to conduct such research? What university structures, processes and policies are required? What faculty, staff and volunteer roles, expertise and experience are required? The literature on infrastructure for research in general (e.g., not specifically about community-university research partnerships) is sparse and points to the need for additional studies to further specify those infrastructure elements that foster effective and productive research (Chesley 2000, Kindig 1999). This literature centers on four core infrastructure elements:

1. Organizing core institutional resources into structures such as centers or offices
2. Supporting career development of individual researchers

3. Supporting and enhancing training in health services research
4. Establishing and supporting research partnerships within the institution and across institutions

In 2001, the National Institutes of Health (NIH) Office of Behavioral and Social Sciences Research commissioned Community-Campus Partnerships for Health (CCPH) to draft a report on the infrastructure required to develop and sustain community-university partnerships for health research. The purpose of this report is two-fold:

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- A focused synthesis of recently published literature, conference proceedings and other publicly available information on or about community-university partnerships for health research.

DEFINITIONS

What we mean by "community-university partnerships for health research"

We define health broadly to encompass emotional, physical and spiritual well being within the context of self, family and community. We sought to learn about the infrastructure required for community-university partnerships for health research across a continuum of methodologies and approaches rather than one in particular (Gills 2001). This continuum includes community-based participatory research, defined as "a collaborative approach to research that equitably involves, for example, community members, organizational representatives, and researchers in all aspects of the research process. The partners contribute unique strengths and shared responsibilities to enhance understanding of a given phenomenon and the social and cultural dynamic of the community, and integrate the knowledge gained with action to improve the health and well-being of community members" (Israel 1998).

What we mean by "infrastructure"

At the start of the project, we developed a definition of infrastructure to guide our work: *Infrastructure is defined as the sum of those elements that are essential and/or required to support activity leading to successful research processes and outcomes.* The list of infrastructure elements generated primarily from our analysis of the literature is included on page 43. This list informed the questions we asked in our structured interviews. In conducting the interviews, we also sought to identify additional infrastructure elements missing from this list. The broad themes of the infrastructure list are: community-university relationship, policies and procedures, financial resources, human resources, and "hard" infrastructure.

INFRASTRUCTURE REQUIREMENTS: WHAT THE LITERATURE SAYS

In choosing articles to include in the literature review, we emphasized review articles, articles that drew from more than one partnership project or center, and proceedings from recent national conferences. The purpose of the literature review was to synthesize existing information regarding the challenges and supportive factors that contribute to the development and maintenance of the required infrastructure for community-university partnerships for research. This synthesis ultimately informed the design of the interview guide, and assisted with the interpretation of the interview data and the development of infrastructure recommendations. The literature reviewed does not represent an exhaustive list. As a strategy to assure that the literature reviewed was sufficiently comprehensive, we invited study participants to review a draft report and comment whether additional literature should be included. No additional resources were recommended.

Defining and Developing Successful Community-University Partnerships for Health Research

Community-university research partnerships by definition require that a *partnership* be in place. Perhaps the most significant issues identified in the literature about the initiation of a community-university research partnership are historical and cultural in nature. Universities often are not viewed by communities as valued partners in problem-solving and indeed the history of university-community and researcher-community relationships is not a proud one (Schultz 2002). In describing the development of the Detroit Community-Academic Urban Research Center, for example, Lantz and colleagues write that some of their early community partners explained their primary reason for participating was to “serve as a ‘gatekeeper’ between the university and the community, to protect their constituents from university research projects that were ‘business as usual’ (i.e., with community members used as research ‘subjects’ but receiving nothing in return)” (Lantz 2001). Other authors emphasize the importance of building relationships and working with community leaders to develop community trust in the research process and to create culturally relevant approaches (Anderson 2002). Cultural insensitivity can represent a primary barrier to community-university partnerships (Arcury 2000). Involvement of community representatives may counter the potential for researchers to assume that an ethnic community represents a homogenous entity and/or to design an approach that is culturally irrelevant and fails to address community interests (Israel 1998, Schulz 2002). An understanding of the community context from both the community and academic partners’ perspectives can also help to create ethical research practices (Israel 2002, MacCauley 1996, NINR 2001).

A number of authors have advanced guidelines, principles and best practices for community-university research partnerships that address these and other challenges (Baker 1999, CCPH 2002, CHSP 2002, Eisinger 2001, Fawcett 2000, Freudenberg 2001, Green and George 2002, Higgins 2001, Israel 2002, Seifer 2000, Turning Point 2002). Drawing on over a decade of experience, Barbara Israel and her colleagues in Michigan have identified nine key principles of community-based participatory research that support successful research partnerships (Israel 1998, Israel 2000). These principles have informed the development of others in the field, including those adopted by the National Institute of Environmental Health Sciences (O’Fallon 2000) and the Kellogg Community Health Scholars Program (CHSP 2002).

- Recognizes community as an unit of identity;

- Builds on strengths and resources within the community;
- Facilitates collaborative, equitable involvement of all partners in all phases of the research;
- Integrates knowledge and intervention for mutual benefit of all partners;
- Promotes a co-learning and empowering process that attends to social inequalities;
- Involves a cyclical and iterative process;
- Addresses health from both positive and ecological perspectives;
- Disseminates findings and knowledge gained to all partners; and
- Involves long-term commitment by all partners.

In their recently published book, *Collaborative Research: University and Community Partnerships*, Sullivan and Kelly describe the environment required for community-university research partnerships to flourish (Sullivan 2001). This environment reflects the principles described above and includes:

- Having an operations office and appropriately staffed committees;
- Establishing a steering or advisory committee to ensure appropriate oversight and guidance;
- Having guidelines and principles that govern the partnership's operations, developed and adopted by the full partnership;
- Having the full partnership identify and approve areas of research focus;
- Using developmental funds to support pilot projects of importance to the full partnership;
- Offering technical assistance and education as requested by partners; and
- Creating a forum to facilitate the early dissemination of research findings and to help translate research into policy and practice.

While these principles and environmental characteristics are useful guides, the authors caution that they should not be imposed upon a project, and that they are allowed to continually evolve to reflect changes in the research context, purpose and participants (Israel 1998, Allen 2001). The process of developing principles and making decisions about the partnership's characteristics is essential to building the infrastructure of the partnership. Other aspects that must be negotiated within the partnership that contribute to the success of community-based interventions include:

- Creating a balance between community-based or –partnered research and scholarship activities
- Visibility of the research in academic institutions. Academic and institutional appreciation for community-partnered research
- Continuing to implement findings into practice and policy
- Inclusion of a service component.

Time emerges as a significant theme in the literature on community-university research partnerships – time to develop relationships, to build trust, to engage in participatory processes (e.g., to determine research priorities, implement research, disseminate findings), to develop a track record of results that can generate more resources, and so forth. The development of organizational structures and processes for carrying out community-university partnerships for research is also time-consuming (Lantz 2001). For example, it took two years for guiding principles to be negotiated between the Detroit Urban Research Center and the University of Michigan's School of Public Health (Israel 2001). The process entailed creating a mutual understanding and trust between the University and the community representatives. As part of

the process, priority issues were identified, operating norms established, and principles were developed that reflected the specific research context. Other activities during this period include:

- Regularly scheduled staff and advisory board meetings;
- Developing a mission statement, goals and objectives;
- Developing principles for how research projects are to be determined and how they are to be conducted;
- Formation and regular meetings of relevant subcommittees; and
- Formation and regular meetings of project-specific oversight committees.

Ongoing assessment and improvement activities are also viewed as critical to the success of community-university research partnerships. Regardless of the phase of development, participatory and formative evaluation activities can play an important and useful role in documenting the partnership process, identifying challenges and barriers, and making improvements (Lantz 2001). Authors, however, frequently point out that this emphasis on process should not be at the exclusion of activities and implementation. An examination of the applicability and usefulness of the research results is essential to determining the successfulness of community-university research partnerships (Sohng 1995, Themba 2002). For example, does the research result in findings that can be implemented and sustained? Does the research lead to increased knowledge that the community can use to develop responsive policies?

University culture, policies and procedures

University culture, policies and procedures can facilitate the development and maintenance of community-university research partnerships. Our review of the literature identified a number of institutional factors that facilitate community-university research partnerships. The more commonly cited factors were (Calleson 2002, Fawcett 2000, Holland 2000, Israel 1998, Nyden 2001):

- Building on prior relationships;
- Having a clear institutional vision and mission;
- Having an authentic participatory, partnership process;
- Having institutional structures for community-university research partnerships, such as centers and offices;
- Having strong leadership at all levels of the partnerships;
- Valuing faculty and student involvement in the community; and
- Valuing interdisciplinary work

University culture, policies and procedures, however, can represent challenges for faculty involvement. The major challenges described in the literature are discussed below.

Skepticism about the rigor, validity and value of community-based participatory research.

Community-based research, and in particular participatory research, is often viewed as service or “public relations” and perceived as an inferior activity, rather than being acknowledged as genuine scholarship. Skeptics argue that community-based participatory research produces questionable results in terms of validity and/or bias (Dockery 2000). This skepticism and lack of understanding may play a significant role, implicitly and explicitly, in hindering the development

of needed infrastructure to support community-university research partnerships. For example, what is the likelihood that supportive faculty review, promotion and tenure policies will be adopted if the committee responsible for drafting the policies is comprised mainly of faculty involved in basic science research? What is the likelihood that a grant will be awarded for a study that uses community-based participatory research methods, when reviewers do not understand that the process of developing the community-university partnership is an essential methodological component?

Faculty review, promotion and tenure.

The most frequently cited barrier to faculty becoming involved in community-university research partnerships is the risk associated with trying to achieve promotion and tenure (Calleson 2002, Maurana 2000, Seifer 2002, Seifer 2003). This is especially true for junior faculty. Faculty are faced with many competing demands, and despite their interest in community-based research and community-based teaching, must pay attention to their career advancement. The methods, processes and outcomes of community-university research partnerships pose significant challenges to traditional definitions of scholarship and paths to promotion and tenure in higher educational institutions.

Most academic institutions confer tenure and promote faculty based primarily on the quantity and caliber of peer-reviewed publications, placing greater value on quantitative, basic research than on other forms of research (Bok 1990, Boyer 1990, Maurana 2000). In this system, researchers who are engaged in community-university research partnerships may be less likely to become tenured, to be rewarded through annual merit reviews, and more likely to become marginalized within their departments as a result of their choice to pursue work in the community. Bok concluded that “equating research and publication with scholarship and promotion has disconnected the academy from the real world problems of contemporary society at the same time that the complexity and number of social, economic and environmental concerns increase” (Bok 1990).

The time involved in relationship building, jointly developing and implementing community-university research partnerships, collecting and analyzing qualitative and quantitative data, and discussing the results with the community often means that it takes longer before research results are generated and published in peer-reviewed publications (Israel 1998, Israel 2000, Lantz 2001, Maurana 2000). First-authored, peer-reviewed papers in prominent journals – viewed by academic institutions as the “gold standard” for dissemination – are often not the most important or even an appropriate mechanism for sharing results from community-university research partnerships. Alternative forms of dissemination, such as newsletter articles, resource guides or legislative testimony, are often not recognized or valued as scholarly products (Maurana 2000).

The perspective of the community-based research team at the University of Michigan School of Public Health – nationally recognized for their expertise and accomplishments – is especially telling. They write “our experience suggests that even those faculty with the belief that a participatory community-based approach to research is appropriate and relevant to their work may find the process daunting, given the pressures of academic institutions on faculty (particularly nontenured faculty) to publish and obtain grant money” (Israel 2001)

The value placed on grants that fully pay for indirect costs.

Foundations are an important source of support for community-university research partnerships. However, unlike federal funding agencies, they often pay very little overhead costs if at all, and as a result, academic institutions value these grants less (Israel 2000).

Institutional review board policies.

As a required part of the supporting infrastructure for all research, institutional review board (IRB) policies are of particular concern for community-university research partnerships. The National Bioethics Advisory Commission reported that the current regulations have a biomedical or clinical research emphasis, which may pose challenges for other forms of research (National Bioethics Advisory Commission 2001). The Commission named “community-oriented research interventions” as posing unique challenges to the oversight system, raising concerns over how to determine what group or which individual can speak for the community.

The CBPR literature also suggests that the ethical review process conducted in a university setting may not be sensitive to the values and ethical issues pertaining to community-based participatory research methods (Canadian HIV/AIDS Policy & Law Newsletter 1999, Farquhar 2002). Challenges identified include IRB reviewers not understanding community-based participatory research methods and a lack of opportunity for the partners involved to engage in discussions with the IRB (Cottrell 2000). Despite these challenges, however, Webb and Eng argue that there is a need to comply with the IRB regulations in order to prevent another Tuskegee (Webb 2001).

Community involvement and infrastructure

In comparison to the culture, policies and procedures within the academy, there is less written in the literature about the infrastructure needed in communities to support their involvement in community-university research partnerships. What is clear, however, is that community involvement and infrastructure are essential to community-university research partnerships. In order to support community involvement, authors emphasize the importance of a non-hierarchical structure within the partnership, community advisory structures, jointly developed norms and principles, a project manager position, technical assistance (grant writing support), communication mechanisms (e.g., e-mail training) and other considerations such as providing financial support (Arcury 2000, Cheadle 2002, Green 2001, O’Fallon 2000, Israel 2000)

Many community-university research partnerships have established community advisory boards (CABs) as the mechanism for community involvement. However, Minkler cautions against establishing a CAB purely to satisfy a funding requirement rather than to reflect a genuine commitment to a participatory process (Minkler 2000). The CAB should meet regularly and have specified roles as well as broad representation. Whether the CAB mechanism is employed or not, the development of trust between community partners and academic partners take time. In writing about the development of the Detroit Community-Academic Urban Research Center (URC), Lantz and colleagues describe community involvement where “the board is not a community advisory group for academic researchers. Rather, it is a body that actively participates in, governs and directs the work of the URC...the URC board does not have a director, an executive committee or any hierarchical feature” (Lantz 2001). Often, partnership structures rely on the good will of individuals within the community to attend meetings and advocate for the research. Since there can be turnover in the individuals

involved, Israel et al. recommend structuring the center and board to include organizations rather than individuals (Israel 1998).

Power, resources and control.

Just as with universities, community-university research partnerships can challenge the reward structures of partner organizations. Lantz and colleagues observe that “for organizations accountable for delivering direct services, their participation in the URC is just one of many pressing responsibilities that stretch their already limited time and resources” (Lantz 2001).

Community partners can express concern about funding that is not evenly distributed among participating organizations. Universities tend to manage most of the money, absorbing both direct and indirect costs. One way to offset this challenge is to provide funding directly targeted towards communities. A frequently cited approach to balancing the power among partners is through the adoption of formal agreements (Baker 1999, Eisinger 2001, Fawcett 2000, Freudenberg 2001, Green and George 2002, Higgins 2001, Israel 2002, Seifer 2000). These agreements can specify the problems and issues to be addressed; the goals and expected outcomes; the activities or strategies to be conducted; the specific roles and responsibilities of each partner; and the terms of funding and performance (Telleen 2001). These agreements are not a panacea for community concerns, but they do offer a mechanism for dealing with issues and documenting what the partners have agreed to.

Human resources

Our review of the literature reveals that community-university research partnerships require significant investments in human resources (Eisinger 2001, Higgins 2001, Israel 1998, Israel 2000, Israel 2001). This investment includes the hiring of appropriate staff and the provision of resources to enable the staff to support the partnership effectively, such as funding for secretarial support, communications, travel, and materials development and dissemination. Israel and colleagues recommended the hiring of a project manager to handle the daily operations of the research partnership process (Israel 2001). Functions of the project manager can include orienting new community representatives to the partnership, preparing and distributing meeting minutes, maintaining ongoing and new linkages, and following through on community requests. The project manager can be university-based, but should spend significant time in the community. Ideally, key staff should be hired through a process in which all partner organizations are involved. A number of community-university research partnerships report hiring community residents for partnership staff positions, thereby demonstrating their appreciation for the value of community participation while also contributing to the community's equality and empowerment.

The knowledge, skills and attitudes needed to build effective partnerships and to conduct community-based research are rarely taught, and in fact may be undermined by the process of higher education. Training resources for community representatives, faculty, and future researchers can build support and further strengthen the partnership. To be effective in conducting CBPR, researchers need to have the orientation, commitment and competencies (CHSP). For example, “they need the capacity to be a co-learner, to work within different cultural contexts, to share power, to be flexible, to provide technical assistance not specific to a particular research effort, and to facilitate group processes” (Israel 2001). Another suggestion for academic partners is to be visible in the community where they are not seen just as

researchers, but also as active community members. This may entail having an office space within the community or attending community meetings.

Building the capacity of community leaders and their organizations to pursue community-university research partnerships is seen as yet another critical component of infrastructure (Cheadle 2002). Vliet and colleagues reinforce the importance of leadership development and the recruitment of new leaders that are traditional and non-traditional (Vliet 2000). Israel and colleagues see the value of capacity building and training for all CBPR partners, including opportunities for community members and students (Israel 2000, Israel 2001).

Funding

The literature highlights a number of challenges that community-university research partnerships face when raising funds to support their work. Many authors point to the need for funding agencies to have an increased understanding of the challenges and needs of community-university research partnerships, and to adjust their expectations and demands accordingly (AHRQ 2001, Higgins 2001, Israel 1998, Israel 2000, NINR 2001, Nyden 2001). For example, funding agency timelines and timeframes do not often account for the generally lengthy process of building relationships and infrastructure necessary to create and maintain community-campus research partnerships. Israel and colleagues describe, “while the School and Health Department agreed to adopt a community-based research approach for the center, there was not adequate time for the development of a true partnership in which all members could contribute to its initial design prior to the grant proposal deadline” (Israel 2001).

The literature also points to the need for grant reviewers to understand the process of CBPR, rather than assessing proposals with the more traditional scientific criteria (AHRQ 2001, Israel 1998, Israel 2000, Vliet 2000). Participatory approaches, for example, may emphasize advocacy and action, which differs markedly from the more traditional research approach that calls for neutrality and objectivity (Sohng 1995). If the grant reviewers are not familiar with the partnership process, CBPR projects risk not getting funded (AHRQ 2001, Vliet 2000).

By offering categorical grants and limiting eligibility criteria for funding (e.g., to school of public health), funding agencies can hinder the opportunities for creative problem-solving and interdisciplinary collaboration. Mburu warns that funding agencies can push their agenda onto a community by defining what issue is addressed and what the indicators of success should be (Mburu 1989). Minkler argues that this can seriously limit the project’s success (Minkler 2000). For some CBPR scholars, the motivating force behind a collaborative research endeavor should be a commitment to the social issue, and not funding resources. In other words, “if the sole motivation is financial, then the long-term prospect of the project will be in jeopardy if resources run out” (Green, Daniel and Novick 2001).

Funding agencies are beginning to acknowledge and support the time it takes to develop community-university research partnerships. There is also evidence that funding agencies are explicitly recognizing community-university research partnerships as a legitimate vehicle for research. For example, the National Cancer Institute’s description of Special Populations Networks for Cancer Awareness Research and Training report that “given the long history of community-placed research, with little or no community participation, and only relatively limited examples of community-based participatory research, the SPNs are strongly encouraged to

take the time and invest the resources needed to ensure full community participation and/or support of all SPN sponsored research” (NCI 2002).

Other examples of recent funding initiatives that emphasize community-university research partnerships include the NIH Centers for Population Health and Health Disparities (NIH 2002), CDC Prevention Research Centers (PRC 2002) and Urban Research Centers (Higgins 2001), HUD’s Community Outreach Partnership Centers (HUD 2002), National Institute of Environmental Health Sciences environmental justice and translational research grants (O’Fallon 2002), the Kellogg Community Health Scholars Program (CHSP 2002), the CDC Office of Extramural Prevention Research grants for community-based prevention research (Office 2002) and the Northwest Health Foundation’s arthritis prevention research grants (Northwest 2002). In 2002, the National Institute of Environmental Health Sciences convened and established the first Federal Interagency Working Group on Community-Based Participatory Research (Federal Interagency Working Group 2002).

Hard infrastructure

There is very little written in the literature about the “hard” infrastructure needed for community-university research partnerships. Several articles and reports cite the importance of having email and web-search capabilities (Israel 2001, Nyden 2001).

INFRASTRUCTURE REQUIREMENTS: WHAT KEY STAKEHOLDERS SAY

This section is based on findings from CCPH’s study involving telephone interviews conducted with stakeholders from across the country. These interviews were approved by the University of Washington Institutional Review Board and were designed, conducted and analyzed by CCPH using non-federal funds. In all, we conducted thirty (30) interviews with a wide range of stakeholders from those involved in multi-site federal initiatives and large university-based centers (including those funded by CDC and NIH), to those involved in community-university research partnerships being led by community-based organizations and agencies. The sample was primarily identified through a web-based search that included 1) federal agencies that funded community-based health research, 2) University-based centers that conduct community-based health research, and 3) community-based agencies known for their involvement with community-based health research. A snowball sampling technique was used to identify other potential study participants. We interviewed principal investigators (n=9) program managers (n=9), community partners (n=6) and funding agency project officers (n=6). Several interviewees also held the title of Center Director and were categorized into either the *program manager* or *principal investigator* groups based on how they described their role within the research partnership. The interview sample included 18 women and 12 men from all regions of the United States. Approximately 100 invitations to be interviewed were sent via email. Nine individuals declined participation or cancelled the interview because of scheduling conflicts. The remaining individuals forwarded the invitation to colleagues and/or opted not to respond.

Extensive notes were taken during the interviews, and the interviews were audiotaped with the participants’ permission. The audiotapes were not transcribed verbatim, but instead were taken in order to verify the notes. Analysis of the interview data resulted in the identification of themes and sub-themes. The themes were identified independently by the authors and then as a team were discussed and verified.

Defining Successful Community-University Partnerships for Health Research

Stakeholders defined success in terms of both the process and the outcomes of the collaborative work. As one program manager stated, the process is a success ‘when everyone makes a contribution to and benefits from the process,’ while the outcome is a success when you can ‘show that something has been learned and something has been achieved.’

Attention to process is integral to community-university research partnerships. In the case of new partnerships, this process often focuses on building trust and a shared purpose, which may include understanding one’s own and each other’s capacities and limitations as well as establishing operating norms and study objectives. In the case of long-standing partnerships, the partnership often focuses on maintaining relationships and identifying new directions. Numerous stakeholders mentioned the importance of establishing an equitable process, a common principle guiding partnership work. For example, this includes the need to address sharing of power and resources such as indirect costs and personnel. Attention to process also entails awareness of the partnership dynamics, including open communication, positive attitude, and reflective practices as individuals as well as a group. An example of a positive attitude, provided by a principal investigator, is approaching the partnership with the belief that community participation is an ‘expectation not a chore’ and actions that demonstrate an understanding of collaboration. In terms of indicators of a successful process, one university-based researcher stated, this would be to ‘continue to have a relationship with the community [where] the community trusts us and we have credibility and the community and organizational leaders are willing to collaborate with us.’

Establishing strong partnerships and building relationships takes time, and throughout the process there should be on going attention to the partnership dynamics. A principal investigator, noting the time and resources needed to build relationships, said that ‘We had the ability to spend over a year working with the community groups who we had not worked with before. This way we could build trust and overcome barriers that existed. You can’t just walk in with the expectations of creating a partnership—it takes time to develop mutual understanding and to make sure you don’t exploit.’

While partnership building and mutual gains were major themes in defining success, another theme that emerged related to the importance of meeting the study objectives, building community and/or University capacity as well as taking action. A successful outcome might be increased screening activities for a given disease, and an ability to offer treatment. Other successful outcomes included identification of improved utilization strategies, an ability to ‘implement and evaluate projects in a high quality, scientific manner’, delivering useful information to front-line providers, and improving outcomes for the community.

Achievement of objectives is facilitated when there is a clear articulation of study objectives, which are mutually agreed upon by the different partners. Adding to this notion, a project officer stated, ‘the goals should be mutually rewarding and there should not be a dominant recipient.’ A strong emphasis on mutually beneficial outcomes was voiced by many of the stakeholders including a community partner who stated that it is key that ‘both partners benefit, are clear what the benefits are, and resources are shared.’ Benefits on the academic side included greater recognition at the university for partnership work and increased opportunities for publication and scholarly presentation. An example of a desired outcome was an increase in the number of multi-disciplinary faculty committed to the partnership research process. On the community side,

benefits included an ability to leverage funding, access to practical tools, increased research capacity within community organizations, and an increase in community ownership of the research process and product. Additionally one university-based researcher viewed the community becoming more independent of the university as an indicator of success.

The focus on process and outcomes can lead to, as described by a project officer, achieving a 'better project because of the community participation. The intervention might be sustained and people more willing to participate.' A project manager also shared that 'ultimately, the work of the partnership can bridge cultural gaps, both ethnic and racial gaps as well as community and university gaps.'

Organizational support for community-university research partnerships

Organizational culture and internal support systems are important to any discussion of the types of infrastructure needed to support community-university research partnerships. Indeed, the culture and infrastructure of each partner organizations influences the culture and infrastructure of the research partnership. For example, are community-university research partnership valued to the extent such work is reflected in each partner organization's mission and policies? Do community-based organizations allow their field staff the time and flexibility needed to participate in research partnerships? Do institutions and organizations facilitate or restrain the individual researchers and community representatives from building strong research partnerships? This section includes a discussion of the ways in which academic institutions and community-based organizations value CBPR processes and research partnerships.

The value (or not) placed on community-university research partnerships

In general, stakeholders who are participating in current research partnerships believe that their academic institutions and community organizations place a positive value on CBPR processes and research partnerships. For some stakeholders, this value is strong and is demonstrated through several of the means described below. For others, the value is there in theory but the evidence is harder to find. As one principal investigator indicated, 'The university does not do anything to undercut the partnership's work. But, it does not do much to facilitate it. The university generally does helpful things if they are cost-neutral.' Even though many stakeholders experience challenges and have suggestions for improvement, most are currently participating in a research partnership that is valued on some level by their individual academic and community organizations. Stakeholders highlighted a number of ways in which organizations demonstrate their support for community-university research partnerships. A number of these are discussed in more depth later in the report, as they correspond to more focused questions in the interviews.

Alignment of the organization's mission with principles of community-university research partnerships.

This alignment is critical for both university and community partners. Does the mission and research priorities of the university incorporate the values of community service, needs, strengths and assets? Does the mission and service priorities of the community-based organization incorporating research and embracing relationships with academic partners? Stakeholders pointed to the importance of creating a unifying mission statement for the partnership and using it as a tool that partners can come back to during times of disagreement or politically sensitive times.

Explicit actions of leaders (e.g., deans and executive directors) that support partnerships.

The actions of leaders and the power of having organizational leaders demonstrate their value for this work was a major theme among the stakeholders. Stakeholders whose partnerships receive active support from deans and executive directors expressed their appreciation. For example, a principal investigator notes that ‘Leadership is important—people at the top saying it’s important work—for example, at the level of the Dean...’. One program manager told of events where deans from across the university came together to visit the community and learn about all of the ways in which various departments are involved in this community. Such an event helped to familiarize the leadership with the possibilities of partnerships in the community, especially for those deans whose departments were not doing work with the city/community. Several stakeholders connected the time and efforts of the “leaders” as directly connected to the “institution”. The same was said for the board of directors, executive directors and community activists who are seen as leaders within community-based organizations. These leaders set the organizational culture, which in turn acts as support for the other staff who are engaged in building research partnerships. As one community partner shared, ‘My board of directors allows us to attend meetings and lets people participate in other programs supporting the partnership.’ CBPR processes and partnerships must be valued by the leaders of the institutions and the community-based organizations and these leaders must demonstrate this value in word and deed.

Marketing and promotion of research partnerships, their findings and outcomes by the academic partner to inform funding agencies, researchers, and communities.

The value of community-university research partnerships is further demonstrated through the “airtime” given to this type of research. Inclusion in university annual reports, newsletters and public relations materials, providing public forums to highlight partnerships and research results, and assistance to community partners in accessing the media are all ways in which stakeholders see the value of research partnerships being demonstrated through practical applications. As one program manager stated, there is high value [placed on this work], in that forums are made available to showcase partnerships in the promotional materials and the institution includes these activities in describing the institution’s purpose.’

Funding that supports the time and “hard” infrastructure needed to build and sustain partnerships (staff, community-located office space, etc).

Funding is a constant issue and stakeholders see funding as the way that universities explicitly show their commitment to this type of work. Funding comes in many forms, from funding personnel positions to building office space for research centers to establishing mechanisms for research funds to flow to community partners. Typically, universities are the partners with the most monetary resources. Thus, stakeholders’ comments focused on how universities demonstrated or could demonstrate their support for community-university research partnerships through various funding mechanisms. The issue of the high indirect expenses that universities charge, and how those funds are allocated, was a particular source of contention among stakeholders. On the community partner side, the idea of funding as a demonstration of value come in the form of focusing staff time and/or providing office space to field staff is discussed further under *in-kind support* below.

Provision of time and flexibility to build partnerships (“in-kind support”).

Many stakeholders point to the need for “in-kind support” for partnership-building, including compensated time out of the office and after hours to attend meetings and community events

and the additional time needed to collect, analyze, and publish data when using a participatory process. In-kind support includes a variety of resources and supports that show how CBPR partnerships and processes are valued. Providing administrative support, equipment, office space, and flexible work schedules are all ways that institutions and organizations demonstrate their value of research partnerships. For one principal investigator, this support came in the form of ‘flexibility and assistance in working off-site and providing the intangible support of accepting this type of work and giving value to help make this type of work a professional career stepping stone.’ A funding agency project officer explained that their funding organization ‘looks at issues of faculty roles and rewards—this tells us whether the project will be valued and rewarded’. For one of the program managers, having the flexible work schedule is a key to the success of the partnerships. This program manager heard from a community partner that the more present one is in the community the greater the trust and relationship between the partners. This means that the program manager must not only attend research project meetings but also lend a hand and participate in other community activities including being in the audience at events and helping to plan other community events.

Encouragement of cross-disciplinary collaboration which in turn supports a culture for partnerships.

On the academic side, organizational value of community-university partnerships is seen through the extent to which the institution allows and facilitates cross-disciplinary/cross-departmental efforts. In explaining how their institutions value their research partnerships, several stakeholders emphasized their institutions’ support of collaboration, consultation and internal referrals across departments. One program manager also described how their research partnership was complementary and supported by their institution’s service-learning center that brings the institutional units together that are doing work in the surrounding city and state.

Changes in procedures and policies with an emphasis on those that support faculty promotion and facilitate the transfer of funds from institutions to community agencies.

Several stakeholders referred to a change in policies and procedures that helps to support community-university research partnerships. These changes are related to the in-kind support that organizations give to show that they value this type of work. Such changes include more flexible work schedules and output timelines; increased options to channel money to community partners; changes in the promotion and tenure policies that reward community-based research; and the existence of community-based organization job descriptions that include research partnership building part of the day-to-day job.

Challenges within the organizational climate

As part of exploring how their institutions and organizations demonstrate their value of the research partnerships, we asked the stakeholders to share their thoughts on the challenges that exist within the organizational climate. Some of these challenges are explored more fully in other sections within this report. The main challenges that impact the organizational climate included but were not limited to:

- Lack of appropriate and consistent types of funding to build infrastructure for community-university research partnerships over time;
- Lack of time and energy required for developing and sustaining successful community-university research partnerships;
- Lack of support and collaborative working styles from leaders within the organizations;

- Inadequate mechanisms for documenting, assessing and rewarding community-university research partnerships in the faculty promotion and tenure system; and
- A history of poor relationships between community and university.

For those stakeholders within academic institutions, it can be difficult to see how the larger university values the work; instead, stakeholders look to department-level leadership and structures to find institutional support for community-university research partnerships. The politics within the institution and between departments can be a significant influence. As one principal investigator explained, 'In the type of work that I do, not everyone is interested in me looking into these things and it can be very political. I have to be aware of the politics and it is nice when the University can come forth—for example, at the upper level—and support you.' Furthermore, CBPR is often seen as “soft science” and/or is valued less than traditional bench research as it requires more time and includes so many uncontrolled variables. For example, one principal investigator stated that 'There have been successful pockets [of community-based research partnerships], but the major portion of bio-scientists thinks of it as soft science.' Thus, the time and effort needed to do community-based research and to educate peer researchers on this type of work is a big challenge. As one funding agency project officer stated, 'One challenge is to create a careful synthesis of community-based participatory research literature to educate peer reviewers on [the topic]' Other stakeholders reiterated this point, including one program manager who commented 'we need to find ways to influence the peer-review process so that scientific review community views this work as important and journal articles are reviewed equally favorably...they need to understand that community-based participatory research has less “controls” and can report on results less often since [the research] takes longer. All of this education is so that junior faculty can publish more in this area.'

Within community organizations, another challenge to overcome is the history of poor relationships between communities and academic institutions. Such histories lead to a culture of mistrust among community-based organizations, where executive directors and board members are then less likely to engage in partnerships and less likely to engage their staff or community members to participate in research partnerships. As one principal investigator explained, 'there is a legacy of mistrust with minority communities and large institutions—look at the Tuskegee study. Growing up in a racist country can cause suspicion of dominant institutions. If I go into communities, all the relationship building is personal. People need to get to know me and trust me personally and know that I will deliver and not just disappear after the study. This happens over time.' Part of the history of mistrust is the lack of dissemination of research findings back into the community. One program manager observed that 'researchers get a bad reputation as communities can feel heavily researched—people can feel like they were involved but did not benefit. There is a problem with the dissemination of findings.'

Community involvement in community-university research partnerships

As part of investigating the infrastructure requirements to support community-university research partnerships, this section explores the ways in which community partners are involved in research partnerships. Traditionally, research has been the domain of academic institutions. However, as the use of community-based participatory methods and community-university research partnerships grows, it becomes even more important to focus on what kind of infrastructure is needed to support community partners.

Community members (agency representatives and residents) are involved in community-university research partnerships as advisors, decision-makers, and implementers through such mechanisms as community advisory boards, community-university coalitions, and paid positions (e.g., field staff positions filled by individuals in the community). There is also a wide range of the “types” of community members involved, from community residents (e.g., volunteers, laborers, and activists) to professional staff of community agencies (e.g., executive directors, county workers, and clinicians).

For some of stakeholders, community involvement comes in the form of being the co-investigators on projects, the reviewers for project applications, and advocates for the communities in which the research is being conducted. Several stakeholders also described capacity-building situations in which the research partnership has hired from within the participating communities to “work in the field”. For example, a program manager reported that the community-university research partnership has hired over 100 community members for individual positions over time (e.g., focus group facilitators, community health workers who are part of a community intervention). These individuals are the “field staff” trained to collect data and facilitate interventions and are housed in the field offices provided by community partner agencies.

Importance of Community Involvement

The majority of stakeholders commented on the importance of having community members involved. By their very nature, CBPR projects require a partnership between the academy and the community and/or among various sub-communities. However, the perspective that community input is necessary and important is crucial if trusting, strong relationships are to be sustained. As one principal investigator described their partnership’s work: ‘In our work together we try to ascertain what kind of resources would be available—rather than develop interventions that might not be sustainable. We look at how the intervention might be programmatically sustainable and appropriate given the [community] agency’s mission. We write it together and make a place where you can honestly express issues, conversations can happen, and you know that it would not make the partnership go away if people disagreed. [The community partner] went after a grant as the lead organization to a foundation. This was the first time that we were subcontracted as evaluators; before we’d subcontract them. We’ve been partners for so long and are at the stage where the community-based organization really sees the value and benefits of research. They know what they want, and they want to be involved even with the analysis.’

Another respondent commented on the necessity of having community partners directly involved in the research process, above and beyond an advisory role. ‘Projects need to have community involvement...’ this program manager stated, ‘or they need to go through peer review that has a community representative on the review committee. The proposed research needs to show such things as the dissemination plan.’

Providing complimentary strengths.

Beyond expressing the importance of community involvement, stakeholders also see community partners as having strengths that are complimentary to the academic partners. In one situation described by a program manager, the community partners are completely equal in decision making power to the academic partners. They help to identify the research projects that are going to be done and help to develop the research project. While the academic partners

might take the lead on writing proposals (which is seen as their strength) the community partners will take the lead in identifying other community partners, making contacts, and building networks.

Being leaders in positions of power.

Other stakeholders described the importance of having community members in positions of power, such as chairing governing and advisory boards. For one principal investigator, having an executive board chaired by the community majority was more powerful ('having more teeth') than 'just acting in an advisory capacity.' Another principal investigator explained that their community members, as part of their overall board are critical to all parts of research, including: developing priorities/specific research areas; developing proposals; developing data collection instruments; conducting surveys; helping with interpretation of research findings; helping to co-author papers; serving on different committees within the larger campus; and participating in presentations.' A community partner also explained that the partnership and the new role of the community help to expand the capacity with their organization. 'We can go after things now. We change who is the central organization for receiving funds (e.g., sometimes the university is the subcontractor and the indirect costs then go to the community-based organization).'

Challenges to Community Involvement

Much like the earlier section on institutional/organization support, stakeholders affirm the importance of investing in infrastructure that supports genuine community involvement. Similarly, stakeholders shared several challenges and recommendations for improvement. The challenges to community involvement in community-university research partnerships include mistrust among partners, inadequate understanding of each other's priorities and cultures, lack of time, and lack of money.

Crossing cultures and aligning priorities.

One program manager described what comes up for many partnerships: 'we often have heated, long discussions. People trying to understand each other, [trying to] compromise. This takes time and can be frustrating—but this is what makes it work.' Like any relationship, the relationship building that must take place for a successful community-university research partnership can run into the challenge of cross-cultural communication, be it between ethnic cultures and/or scientific/non-scientific ways of knowing. Such cross-cultural communication issues are confounded by the pressures of time and by mistakes made in the past. These challenges are seen in the comments of one community representative who explained the community's challenge of working with the academic research center and part of their community advisory committee: 'Much of the research has not been culturally sensitive. The Center is in the heart of a city that has largely residents of color but the Center is mostly white. There has been insensitivity to cultural issues and no dissemination of research results. The community advisory committee has had to deal with all of this. Now the committee requires that researchers describe their dissemination plans [as part of the research proposal]'

For the academic partners, getting community involved enough to 'take ownership' of the research process, interventions and results can be difficult. One campus-based program manager described being frustrated at times when their community representatives have shown a lack of ownership on projects, a lack of awareness that their contributions matter, and lack of willingness to expose other organizational relationships so that network activities are not

duplicated. Cross-cultural divides, time limits, and weak relationships are some of the possible reasons behind these obstacles.

In addition to cultural conflicts, there can be conflicts of priorities. Academic researchers and the research funders can differ with community members in terms of what constitutes the priority for research. According to one funding agency program officer, 'we fund health interventions and research. Many times this may not be the community's highest priority. They might want to work on issues of crime or economic issues. So the interests on the two sides may not be equal.' In addition, the community might not be willing to readily identify problems within their own community, be it HIV prevalence or drug-abuse. Some stakeholders spoke to this issue in terms of recommending that academic researchers identify the research priorities and community assets *with* the community. Community partners bring strengths and assets to the table and do not want to only be representatives of problems to be solved.

Lack of time.

Lack of time and the pressure of time has been cited repeatedly in the literature and in multiple topics covered by the interviews. Time is one of the biggest challenges to building strong and trusting relationships among the research partners and within the various organizational structures that impact the partnership in order to then be able move on and effectively identify research priorities, implement projects, evaluate and disseminate. In addition, lack of time relates to very practical challenges: conflicting schedules and time to process forms, budgets, and requests through bureaucracies. As one funder shared, 'We hear issues from both community and university partners about time—it takes a lot of time to interact with the university to engage with planning especially when working with students. This is an issue for faculty too. [This work] just takes a lot of time for planning, reflections and managing.'

Lack of funding that specifically supports community involvement.

Another issue that comes up repeatedly for community involvement is that of compensating community representatives for time traveling to and attending meetings, time spent on implementing interventions through their agencies, and time spent in a general advisory role. One community representative explained their situation as one where the community-at-large (those community representatives not affiliated with community-based organizations) gets funding for mileage and time spent at meetings but there is no stipend for the community partners that represent the community-based organizations. Community agency staff infrequently have funding support for staff time related to community-based research partnerships. These funding pressures are even more significant given recent cut-backs in federal and state funding for community services.

Policies that strengthen community-university research partnerships

Stakeholders discussed numerous policies considered helpful to strengthening the community-university research partnership process. These strategies include the drafting of memos of understanding, principles of collaboration, and partnership agreements. These are written documents that help to identify, for example, mutually agreed upon expectations, priorities, and operation norms. Having a clear set of objectives and goals can help create a structured approach, which can serve as a road map to guide the partnership work. Many of the stakeholders mentioned the importance of flexibility and the need for the advisory board to review and revise these strategies.

In terms of principles of collaboration, these may be adopted at a university-wide level, community-based organization level, or just within the partnership. Examples of principles offered by the stakeholders include recognizing strengths and expertise of all partners, and sharing ownership of the research process and products. For some partnerships, there are written policies regarding how the advisory board reviews proposals and decides whether to pursue a funding agency “request for proposals” or whether to endorse another group’s research proposal. A community partner considered the principles as a ‘cornerstone of success,’ an integral part of infrastructure, and an essential mechanism to establishing community trust. If for example a partner dismisses one of the agreed upon principles, trust will erode. Principles of collaboration should be negotiated by the partners and therefore will vary across partnerships. In terms of partnership agreements, these statements may be between partners or between the university and the sponsoring agency.

Other written statements that can help strengthen community-university research partnerships include having a strong mission statement as well as establishing advisory board by-laws and process guidelines (for example, agree to disagree and decision-making by consensus). One community partner discussed how it is helpful to have a membership policy around such issues as attendance. Also recommended were developing co-authoring guidelines, action plans, dissemination requirements, and financial policies around such issues as subcontracting and overhead costs. A community partner also recommended that the partnership develop policies around hiring. In the example given, this included funding at least one position that can help facilitate the partnership and support community partners who might have full time jobs in addition to their partnership work. Some of these individuals’ partnership work is uncompensated. At the university level, hiring and promotion policies as well as a strong affirmative action stance would demonstrate support for partnership work.

In terms of the role of the funder, a principal investigator suggested that funders offer more guidance around partnership processes and since ‘money will speak’ they should also require evidence of partnership. Another respondent felt that funders should recommend, but not require, memos of understanding. One of the project officers, however, cautioned that oftentimes they do not have the time or the resources to monitor whether these memos are followed.

Development of policies.

The policies and strategies aimed at strengthening the partnership were almost uniformly developed collaboratively. In some instances the principal investigators or the program manager took the lead in drafting the policies, and then presented them as a draft version to the community partners. These drafts were open for revision. In other partnerships, the community and academic partners developed policies together during meetings and retreats. None of the stakeholders described a process where a set of principles or norms was imposed upon the group. Recommendations for policy development is therefore allowing for the degree of collaboration that makes the most sense given the interests and availability of the different partners. The need to revise guidelines and policies periodically, especially when new situations arise or new partners join the group, was a recommendation generated by many stakeholders.

Evaluation policies.

Recommendations for evaluations included conducting more qualitative and participatory processes. Several stakeholders stressed the importance of looking at the impacts of the

research project and not conducting just process evaluations of the partnership. For these stakeholders, community-level outcomes represent the bottom-line and therefore must be measured.

For some stakeholders, the partnership's advisory board decides upon the evaluation questions, objectives and methods; and then the board hires an external evaluator. Ideally the evaluator understands the community-university research partnership process and is able to produce a rigorous study. Evaluation findings should then be presented at least annually to the advisory board to determine whether changes need to occur within the partnership or with the actual research project. For some projects, continuous feedback is provided to the board. One community partner stated that the advisory board allots time to discuss the value of evaluations and how to best proceed given the partnership and its work. In other projects there is only an informal evaluation process. Informal processes might entail the chair of the advisory board contacting partners between meetings and assessing their satisfaction with the partnership work. Even with the informal process, information gathered can provide valuable insight into the direction of the partnership. Evaluation of the actual research projects should be shared with the different community stakeholders.

Budget policies.

Several of the interviewees reflected upon the importance of budgetary issues being consistent with the values of community-university research partnerships, including the importance of sharing resources and demonstrating mutual respect. As one researcher commented, the budget policies will work themselves out as long as the partners adhere to the principles of community-university research partnerships. For some of the respondents specific recommendations were stated, including subcontracting with a community organization, providing the funds to pay for a full time position within a community agency, or offering compensation for community partners' time. For one program manager, it was also important that not all of the grants be funneled directly through the University, as this may convey a message of dominance. Funding issues also can be problematic to community organizations if the University's reimbursement rate is slow and there is an expectation that the organization will "float expenses" until the money is available. Overall, the partnership could benefit from support offered in grant writing and general assistance during the budget development process

For several of the stakeholders, budget policies were not viewed as a priority. This was the case for partnerships where the University or funding agency decided financial matters, or where the partnership operated on such a limited budget that formalized budgeted policies did not seem necessary.

Faculty review, promotion and tenure policies.

The majority of stakeholders identified promotion and tenure policies as a significant issue, or even a 'huge barrier' for faculty involvement in the research partnership. This is particularly the case for junior faculty members who have the most to risk with their academic careers. A program manager described how their partnership lost faculty because of the pressure for these individuals to meet the promotion and tenure requirements. A principal investigator sees the problem as universities not understanding or not placing value on CBPR. 'Applied research oftentimes is less valued and consequently rewards are more internal—meaning researchers feel as if they are contributing to society rather than receiving rewards from the university

system.’ Those who did not see promotion and tenure policies as a barrier acknowledged that this reflected the value placed upon partnership work by their department or university.

Policies around community agencies’ performance review or job expectations.

Staffing and compensation issues were identified as barriers for community partner involvement in the research partnership. Partnership work requires time and therefore may interfere with other job-related responsibilities. This can be a hardship when a community agency is already understaffed. As a project officer commented, partnership involvement can create tension around competing obligations—‘to take time away from their community-based organization can introduce strain with the relationship this person has with their organization.’ It should be noted that not all community partners are employed at a community-based organization. A project manager felt the challenges would vary by agency depending largely on whether the agency had adequate staff. This project manager stated that ‘time is the biggest issue since community agencies have fewer people and less resources.’

A community representative also identified compensation issues as a barrier to participation. Community agencies are not always paid for the staff time, or sometimes are paid an insufficient amount. This can negatively impact agency buy-in, which might prevent partnership work from being prioritized or incorporated into employees’ job descriptions. Contributing to a lack of support can be the potential for lack of trust by the agency directors for the partnership work.

One of the researchers interviewed commented that the tension experienced by community partners is similar to the tension faced by academic researchers. Both have competing demands, and the reward structure may not fully acknowledge the value of the partnership work. While supporting the notion that there are similarities between the tension experienced by the academic and community partner, a project manager pointed out that limited resources tend to be a greater issue for community agencies. One community representative mentioned that partnership recognition was praised with honorable mentions, but that there was no financial support for the work of the partnership. A program manager described how involvement in the partnership might be part of some community partners’ job expectations. For other stakeholders, they were unaware of or did not believe that tension existed due to community partner involvement.

Human subjects policies.

Community partnership research projects often go through the human subjects review process. Several people believed the challenges of the human subjects review process are the same for community-based research as it is for other research approaches (e.g., lab research). One respondent saw this as a reflection of how the institutional review board (IRB) is overworked and understaffed. Others, however, felt that the university’s interpretation of the regulations reflected an academic mindset that is not necessarily consistent with the approach of community-university research partnerships. For example, there was a sense that the IRB applied the same standards used for high-risk projects to assess lower-risk community-based projects. Another perceived challenge is that sometimes the expectations of the IRB are not flexible enough given the reality of fieldwork. One project officer suggested that flexibility might vary depending upon the size of the institution, where IRB flexibility is greater when it is located at a smaller university versus a larger research institution.

Several stakeholders voiced an understanding of the need and value of the human subjects review process, but felt that it is problematic if the reviewers are unfamiliar with the CBPR

process. An example of one of the benefits cited by a community representative was how the process strengthened the protections around issues of confidentiality. Although the value was acknowledged, another community representative felt the process was at times unnecessarily detail-oriented.

Other challenges identified related to the amount of time required to gain human subjects approval and the problems associated with having to go through multiple IRBs. A researcher described how the review process takes too much time both in terms of gaining initial approval and approval for revisions. A program manager, also commented about the time issues, but felt that it was 'important enough to warrant being behind on project timelines.' Several individuals also described the challenges with having to submit human subjects applications to different IRBs for multiple-site projects. Multiple reviews can increase the time before approval is granted and create challenges for the research team if the different IRBs raise different questions.

Others commented on the growing complexity of the process. One researcher, for example, described how there is additional requirements pertaining to data monitoring and safety reviews. This same researcher commented, however, that the complexity is understandable given the 'scrutiny that the university is under.'

Communications policies and procedures.

As part of our discussions with stakeholders on the policies and procedures that make up supporting infrastructure for research partnerships, a number of procedures were identified that help to facilitate communication between and among the research partners and build trust over time. These communication procedures include:

- In-person meetings with email and phone updates: In-person meetings are a crucial component to strengthening the relationships. When responding to requests for proposals, the need for these in-person meetings puts significant pressures on the timeline for responding. Several stakeholders emphasized the importance of face-to-face meetings.
- Open communication between all levels of authority: Academic leaders in particular must model this behavior.
- Formal written documents developed by all partners: These documents outline the partnership's shared mission, governance model and process for decision making, timing and format of meetings, and are important for facilitating communication and orienting new partners.

Staffing and personnel needed to facilitate community-university research partnerships

Staffing and personnel are considered an essential part of the overall infrastructure required to support research partnerships. Staffing configurations vary across community-university research partnerships, and depend in part on the nature and complexity of the research, the number of partners involved, and the developmental stage of the partnership. Both the literature and our conversations with stakeholders indicate that a number of positions are viewed as essential to any community-university research partnership. The essential positions include:

- *Individuals in leadership positions.* Most stakeholders we spoke to emphasized the importance of strong leadership for any research partnership. To be most effective,

individuals who are part of the research partnerships ideally hold positions of authority and/or leadership within both the academic institutions and the community-based agencies. For the academic side, the academic leader would most likely need to have tenure, or at least be on the tenure track, in order to provide the type of leadership and support necessary. For the community side, the community-based point person needs to be in a leadership position where he/she knows about the organization's daily operations as well as strategic positioning. Ideally these functions are part of the point person's job description. For some of the stakeholders, a balanced level of leadership from the academic and community side is preferable. This means that each side needs a point person with a comparable seniority and an ability to effectively accomplish identified tasks within the power structure of each organization. Stakeholders discussed this issue from their own experience in terms of what has worked and/or what they recommend for the future.

- *Individuals who can manage the partnership process.* Although titles vary (e.g., project coordinator, program manager, community-academic liaison), the idea of a project manager, bridge-builder, and/or research broker was emphasized during conversations with stakeholders. The position fosters the growth of the partnership, manages logistics, and can act as link between the academic partner, the community advisory board, community partners, and any subcontracted agencies. See Section VII for detailed findings from the stakeholders which have been included in the form of an ideal job description to further characterize this essential position.
- *Data management position based in the community partner agency.* Community partner stakeholders identified this position as essential. A community-based data management position is seen as a significant need that has not been consistently met. One community representative identified this as the "biggest challenge" for their organization, and another community representative called this 'one of the biggest infrastructure issues.' At times students can assist with data management, but more permanent staff is preferred to build the community agency's capacity.
- *Principal investigators.* Stakeholders indicated the importance of having principal investigators from the academic side who are a committed group of faculty from multidisciplinary backgrounds and who are committed to the relationship and the principles of community-university research partnerships.
- *Individuals from the community.* Community-university research partnerships often hire staff from the partner community. For example, staff may be hired as focus group facilitators who have the appropriate language and cultural skills, and/or for philosophical or ethical reasons (e.g., a principle of partnership is to build community capacity). Stakeholders indicated that it was essential to have community members in paid positions and recommended that the research project build-in the resources to train the community staff and institutionalize these positions
- *Other essential staff* include administrative and clerical staff to assist with communications (e.g., mailings, web site) and other clerical duties; fiscal staff to help secure grants and to facilitate subcontracting with partner agencies; project specific staff such as community health workers hired from the partner community; and students at multiple levels--undergraduate level, graduate level, post-doctoral fellows.

Skills, competencies and knowledge to strengthen community-university research partnerships

In addition to the types of individuals and positions discussed above, conversations with stakeholders included a discussion of the essential skills and characteristics that are viewed as essential for community-university research partnerships. The essential skills and characteristics below are “generic” in the sense that they are not tied to a particular role or position within the partnership (see section VII. below for an ideal job description for a community-academic liaison position).

- *Interpersonal and facilitation skills* (e.g., sensitive to community needs, a good listener, trustworthy and capable of understanding and appreciating b diverse groups, a good communicator who can keep partners motivated and informed, able to understand and feel comfortable in both the academic and community setting)
- *Technical skills* (e.g., skills in planning and organizing, evaluation, writing, computer software programs, multiple languages)
- *Connections to the community* (e.g., placing a high value on community perspectives, knowing the community resources and being known in the community)
- *Commitment to the substantive issue and the partnership process* (e.g., a desire to seeing the partnership grow, a deep interest in community health issues)

Stakeholders emphasized the need for skill development among all research partners. For example, one principal investigator commented that *‘All partners could get training in how to implement results. This takes good communication to take results and encourage their implementation by other clinicians.’* The community partners we interviewed frequently emphasized the need for academic researchers to be better communicators and listeners. One community partner recommended *‘Come out of the office and meet with the community to see what’s going on in terms of the value of the research to the community. Sometimes things are judged from afar, but you need to have first-hand knowledge and be willing to communicate.’*

Funding community-university research partnerships

Stakeholders raised a number of issues regarding the role that funding plays in facilitating and impeding community-university research partnerships.

Funding sources.

For research grants, private foundations are generally viewed as being a more responsive funding source than government agencies for a variety of reasons. Foundations are viewed as more “relationship-oriented”, allowing more time for prospective applicants to develop and shape proposals, and being more flexible and receptive to new models and approaches. As a result, foundations often allow the lead-time required to develop community relationships and pull a collaborative proposal together. Foundations often have less restrictions and requirements – for example, allowing the specific research aims to emerge from the partnership process rather than be specified up-front in the grant proposal, being able to pay for food with the grant when this is integral to the partnership-building process. On the other hand, private foundations are more likely to fund service-oriented programs than research. And indirect expenses, if paid at all, are paid at a very low rate (typically 5-10%).

Funding agency requirements and timelines.

The “request for proposals” requirements and timelines for state and federal funding agencies often do not honor the time and money required to develop research partnerships. Several stakeholders questioned whether short-term grants (3 years or less) were even worth applying for, especially when a community-university research partnership infrastructure was not already in place. Stakeholders voiced the need for planning grants, allowing more planning time to be built into grants, and longer duration of grants to be able to achieve community impact and change. Stakeholders recommended that funding agencies specifically request that the methods section in research proposals be required to describe the partnership development process. Research budgets also should be allowed to include expenses for food, promotion and communications.

State and federal funding agencies are increasingly expecting community involvement and community partnerships in research, but they may not fully understand what this really means. For example, they may not fully appreciate the time it takes to develop community relationships or to write a collaborative grant proposal.

According to stakeholders, funding agencies, particularly at the federal level, can work at cross-purposes in terms of their timeline, requirements. Many of the people we interviewed hoped that funding agencies could collaborate for a more unified, streamlined approach, especially as we move away from disease-specific studies to encompass more multi-factorial studies of the social determinants of health.

Despite an increased emphasis on social and behavioral sciences within the National Institutes of Health, researchers continue to report greater difficulty obtaining funding for community-based research when compared to more traditional research. Most funding agencies that support public health and prevention research have established priorities for studies that examine categorically defined physical health problems, involving interventions at the individual level; focusing outcomes on morbidity, mortality, and risk factors; using traditional research designs in which the expert researcher defines the problem and the methods used; and occurring within a specified and limited time frame. Such funding priorities are often in direct conflict with the key principles of community-university research partnerships and the concerns of many community partners.

Several of the funding agency program officers we interviewed believe that their “requests for proposals” support CBPR but are receiving fewer proposals using such methods than they expected. This observation was expressed in the interviews with principal investigators and program managers as a concern that some funding agencies and their reviewers do not “get” CBPR. In other words, the interviews point to a disconnect between what funding agencies think they would consider funding or actually do fund, and what prospective applicants believe to be the case. It is also possible that community-based researchers are not aware of these funding sources.

Funding centers vs. individual projects.

Funding agencies expect grantees to leverage funds with institutional and other resources. Institutional funds in particular are seen as a sign of their commitment to CBPR. Successful community-university research partnership centers are pursuing multiple funding sources – federal center grants, state funding, private foundations, institutional funding, endowments.

The center funding model (e.g., CDC Prevention Research Centers, HUD's Community Outreach Partnership Centers) is viewed as a way to build the relationships and infrastructure needed for community-university research partnerships. However, there is concern that a limited number of institutions are in a position to be competitive for these funds to the exclusion of other universities and communities that are eager to engage in partnerships for research. Resources tend to be concentrated in certain geographic areas. Also, there is concern that the model is building infrastructure at the university level, but less so at the community level, since universities are nearly always the fiscal agent, with few dollars allocated to the community-based individuals or organizations involved.

The grant review process.

There is concern that grant reviewers, especially at the federal level, are dominated by individuals from basic science who do not "get" community-university research partnerships. A similar observation was made for journal editors and reviewers.

- Guidance is needed for reviewers on community-university research partnerships and the capabilities of community agencies
- A new cadre of reviewers who are involved in community-university research partnerships are needed
- More evidence-based practice and reports on CBPR are needed to guide funding agency decisions, reviewer protocols, etc.

Community agencies as the grantee.

There is significant support among stakeholders for research grants to be managed by community agencies and not almost exclusively by universities as is currently the case. At the same time, a number of people we interviewed acknowledged that managing federal grants in particular is quite challenging and that support would be needed in the form of training and technical assistance. Community agencies involved in research also have indirect costs. Models are needed for how indirect costs can be shared and how research grants can be shared between academic and community partners.

Training needs.

A number of funding-related training needs were identified by those involved in community-university research partnerships, including grant writing and fundraising within the partnership (not just for the principal investigator).

The significance of NIH.

Stakeholders frequently pointed to the significant role that the National Institutes of Health could play in increasing the legitimacy and funding for community-university research partnerships. In the words of three stakeholders: 'The key to funding community-university research partnerships is getting NIH on board.' 'Can NIH change the grant making process [to allow community-based participatory research]? 'How do we deal with the reviewer problem [at NIH]? Reviewers don't understand community-based participatory methods and don't understand diverse communities.'

INFRASTRUCTURE REQUIREMENTS: KEY ISSUES AND RECOMMENDATIONS

The key issues and recommendations below emerge from our review of the literature, our analysis of the stakeholder interviews, and our project team discussions. When possible, we have incorporated illustrative examples of how a recommendation has already been implemented in some form. Also, although this report is being written for the NIH Office of Behavioral and Social Sciences Research, we are not suggesting that all of these recommendations can or should be implemented by NIH. However, we believe that NIH can play a significant role in advancing many of these recommendations, by either serving as the lead agency or convening other key stakeholders to take action.

ISSUE #1: Community-based research, and community-based participatory research in particular, is often viewed by the academic community at best as inferior to other forms of research and at worst as not even research. This perception contributes to challenges with gaining academic support in such areas as promotion and tenure.

RECOMMENDATIONS:

Assess and expand the evidence base for community-based participatory research.

In the words of one author, "...as CBPR must often operate...under a constant cloud of institutional skepticism, it is difficult to assess CBPR's full potential and limitations" (Coburn 2002).

- Commission evidence-based reports on community-based participatory research. These reports could address such questions as "what research questions are most suited to community-based and participatory approaches?" and "what evidence exists that community-university research partnerships are effective in translating research into practice?" The Agency For Healthcare Research and Quality has recently commissioned Research Triangle Institute and UNC-Chapel Hill School of Public Health to conduct an evidence-based review of CBPR in public health, which will help to address this recommendation.
- Establish and update an online annotated bibliography of articles about and based on community-university research partnerships.
- Create consistent and standardized keyword terms for community-university research partnerships, community-based participatory research and community-based participatory research.

Increase the number of peer reviewed journals that understand and are interested in community-university research partnerships.

With peer-reviewed publications as the gold standard for academic recognition and the dissemination of new knowledge, increasing the opportunities for peer-reviewed publications on community-university research partnerships is critical. One funding project officer we interviewed stated that publications are important in order to assure that community-based participatory research is a respected methodology, noting that there is a 'need to publish at the same rate so [CBPR] is not seen as a second-class citizen. It will take longer, but if you are at a research university you should publish. This should not become a service thing.' Publications can discuss both the outcomes as well as the process of community-university research partnerships.

- Convene journal editors to elevate their understanding of community-university research partnerships
- Pursue and sponsor journal issues on themes related to community-university research partnerships. For example, the WK Kellogg Foundation is sponsoring a forthcoming CBPR theme issue of the Journal of General Internal Medicine (Aaron 2002).
- Develop guidelines for the methods section of articles based on research conducted through community-university research partnerships. These guidelines can appear in journal “instructions for authors” and can be used by journal editors and reviewers.

Restructure faculty promotion and tenure policies to recognize and reward community-based scholarship.

Many authors recommend that universities recognize and reward faculty involvement in community-university research partnerships and provide appropriate faculty incentives and release time (Calleson 2002, Israel 2000, Maurana 2000, Nyden 2001). A small but growing number of research-intensive institutions, including the University of Washington, the University of Pittsburgh, Harvard University and the University of North Carolina-Chapel Hill have been actively involved in changing their review, promotion and tenure to be more supportive of community-based research (Seifer 2002).

- Convene national professional organizations for a summit on scholarship in the health professions. The summit would commission papers, feature speakers from research-intensive institutions that have made supportive changes in their review, promotion and tenure policies/processes, and seek follow-up actions by the associations and their members.
- Establish an online resource center for faculty members who are involved in community-university research partnerships. The center would include such resources as: examples of progressive review, promotion and tenure policies; examples of faculty portfolios and curriculum vitae; links to journal articles on community-university research partnerships; and guidance for documenting community-based scholarship.
- Have funding agency “request for proposals” ask for documentation of the academic institution’s review, promotion and tenure policies and evidence of institutional support for faculty who are engaged in community-university research partnerships.
- Establish a peer mentor network of senior faculty who can serve as mentors and external peer reviewers of community-based scholarship.

Increase federal funding for community-university research partnerships.

It is no surprise that funding streams influence academic institutions. Funding often drives an institution’s research priorities. As one principal investigator we interviewed commented, ‘If the funders speak they will come. If this type of research is clearly a priority of big funders then the university will offer more support.’

- See recommendations associated with issues #2, #3 and #4, below.

Prepare institutional review boards for proposals that include community-university research partnerships.

- Expand IRB committee composition to include community partners who have experience and expertise in conducting community-based participatory research and other community-university research partnership approaches (Freeman 2001).
- Offer ethics consultations to community-based researchers as they develop their research projects (Dockery 2000).

ISSUE #2: The process developing and sustaining partnerships is not often valued and recognized by the funding and academic communities as an essential part of the methodology of community-based research. This process takes time and is significantly strengthened by having a permanent staff person who serves as a community-academic liaison for the partnership.

RECOMMENDATIONS:

Provide funding support for planning, partnership development, partnership evaluation and dissemination as an essential part of the methodology of community-university research partnerships.

Most of the people we interviewed described the benefits of having a dedicated staff person serving as a “community-academic liaison” for the research partnership. This position can help to bridge the cultures of community and academe, and maximize the partnership’s ability to draw on the strengths of each. According to one community partner, ‘Any community-based organization working with academics needs a point person for the academic side. Someone who has decision-making power or can get decisions done quickly. The liaison needs to be in the know and know the bigger picture...for example the strategic direction. The liaison has to have enough power to figure out where folks fit in a timely manner—faculty can call from a variety of schools wanting to be involved with our agency.’ A program manager described their role as an integral part of the required infrastructure for community-university partnerships. This stakeholder viewed the required skills for this position as someone who can ‘understand both sides; who can speak for the community, raise tough issues, and not just be passive, but willing to push things forward.’ An ideal job description for this position is included in this report on page 41. In addition to developing a liaison position, organizational structures were also recommended as a valuable source of support. A function of these structures would be to support community involvement, such as community advisory boards, community committees, and offices of community-university partnerships.

- Offer partnership development and planning grants to academic institutions and community-based organizations to support the process of building a community-university research partnership. These grants should include funding for a community-academic liaison position.
- Include a 6-month to 12-month planning process in research grants that involve a community-university research partnership.

ISSUE #3: Funding mechanisms, policies and procedures are often biased against community-university research partnerships. This bias can be implicit or explicit and may be inadvertent, but is a concern nevertheless.

RECOMMENDATIONS

Facilitate opportunities for funding agencies to expand their knowledge of community-university research partnerships, and to exchange information with the field.

- Other funding agencies might model the approach being taken by the Office of University Partnerships (OUP) at the US Department of Housing and Urban Development. HUD often hires an individual from the field of community-university partnerships for a one-year stint as OUP director.
- Funding agencies might provide staff sabbaticals in the field, enabling them to gain more direct knowledge of the challenges and issues faced by grantees.
- Either expand the federal interagency working group on CBPR to include private foundations, or establish a separate private-public working group on CBPR.
- Facilitate opportunities for the federal interagency working group on CBPR to interact with the field of community-university research partnerships, through symposia, consensus conferences and other mechanisms.

Allow funding to be used for expenses associated with meeting space, food, hard infrastructure, administration and program evaluation.

These categories are often pointed to in the literature and in interviews. Stakeholders suggested that the challenges to effective communication among partners would be addressed by increasing computer and email capacity for community partners; providing staff support, time, and food for in-person meetings; increasing training to familiarize all partners with each others' language and tools to translate research jargon into accessible language; and supporting administrative staff and evaluators as part of the required communication infrastructure. Administrative staff are key to producing communication products (e.g., minutes, notes, newsletters) and evaluators are key to producing feedback/reflection on partnership processes.

Design funding initiatives that encourage or require community-university research partnerships.

Authors and the individuals we interviewed advance a number of recommendations for how funding agencies can genuinely support community-university research partnerships. These include:

- Offer planning grants where partnerships have the opportunity to build relationships between the university and community and between community partners and to build the infrastructure needed to maintain these relationships.
- Offer long-term funding that is not categorical or project-specific but rather allows for the specific projects and activities to emerge from a participatory process.
- Offer funding that continues the investment in the partnership infrastructure during the times when project-specific grants run out or are scarce.
- Extend the role of the funding agency to go beyond making time-limited grant investments to include other types of assistance such as convening meetings among community-university research partnerships and their key stakeholders, brokering additional resources from other funding agencies, offering technical assistance in grantwriting and partnership development,

offering grants and technical support for evaluation and dissemination, disseminating best practices and successful programs, and speaking out about the value of community-university research partnerships.

- Communicate and collaborate across federal funding agencies around issues of community-university research partnerships. The outcomes of these efforts could include greater translation of research findings from the agencies that fund research (e.g., NIH) into practice at the community level through agencies that fund education and service (e.g., Health Resources and Services Administration) (Brakefield-Caldwell 2000).
- Include language in the appropriate funding announcements to let researchers know that community-based participatory research is an acceptable and/or recommended methodology and what the criteria will be to determine the project's rigor.
- Offer incentive grants to facilitate the ability of multiple centers at the same university/community to collaborate on research and use resources efficiently.
- Require that applicants demonstrate how the proposed research will impact the community – i.e., including a community impact statement in the proposal. The community impact statement could address how the community is involved in the proposed research, how the community will benefit, whether and how jobs or community capacity will be developed, etc. Similarly, research proposals with intervention components should be required to address how the intervention will be sustained, how the results lead to sustainable changes in community practice, how the results will be disseminated to other communities, etc.
- Include a “community partnership” component to all research grants, similar to the community outreach and education component that NIEHS includes in their center grants.

Recruit and prepare reviewers to competently review proposals for community-university research partnerships.

- Develop guidelines that reviewers can follow to assess the quality and rigor of community-based research proposals, including assessing the relevance and authenticity of the community-university partnership. The University of British Columbia's Institute of Health Promotion Research has developed such guidelines (Green, George et. al. 2002).
- Recruit reviewers who have experience and expertise in conducting community-based research, including community partners.
- Prepare reviewers for their role in assessing community-based research proposals, through such means as tutorials on community-based research methods, community-university partnerships, the use of the guidelines mentioned above, and mock study sections.

ISSUE #4: Limited numbers and types of academic institutions are pursuing community-university research partnerships.

RECOMMENDATIONS:

Much of the peer-reviewed literature on community-university research partnerships comes from investigators at a relatively small number of academic institutions. For community-university research partnerships to gain legitimacy, generate significant knowledge and translate research findings into practice, they will have to become more prevalent.

- Continue and expand funding available for centers for community-university research partnerships (e.g., CDC Prevention and Urban Research Centers, NCI Special Populations Networks).

- Offer technical assistance and planning grants to develop the capability of a broader range of communities and universities to apply to be centers.
- Designate Centers of Excellence in Community-University Research Partnerships. Fund these Centers to serve as mentors to emerging community-university research partnerships in their region (e.g., by providing training, technical assistance, sub-grants).
- Have more open and well-publicized pre-planning/discussion meetings around forthcoming requests for proposals, including opportunities to comment on drafts and nominate reviewers.

ISSUE #5: More barriers than incentives exist for community-based organizations to engage in community-university research partnerships. The imbalance of control of power and resources between communities and universities can undermine the sustainability and significance of community-university partnerships for research.

RECOMMENDATIONS:

Increase the likelihood that research funds awarded to universities will pay for research-related expenses incurred by community partners.

Most community agency staff involved in community-university research partnerships takes part on a volunteer basis. Service delivery grants do not usually pay for research costs, and program evaluation is often under-funded by these sources. Universities are bureaucratic and often have personnel and contracting rules that interfere with community-university research partnerships and their goal of sharing resources. For example, it can be difficult to recruit and pay individuals from the community. As one researcher we interviewed commented, 'Ultimately we should move towards subcontracting, then the community can own the grants and handle the money themselves. Subcontracting mechanisms should be developed so that grants can be easily executed and so everyone can understand the cash flow.'

- Make it clear in "requests for proposals" that research-related direct and indirect expenses incurred by community partners are legitimate expenses that can be included in proposal budgets.
- Require that applicants describe and document the research-related direct and indirect expenses incurred by community partners, and ask them to either include reimbursement for those costs in the proposal budget or document those as matching cash or in-kind support
- Disseminate case studies and sample budgets that demonstrate "best practices" by community-university research partnerships that have facilitated research funds flowing from the university to community agency partners (e.g., simplified subcontracting procedures, creative sharing of indirect expenses) or have compensated community partners in other ways (e.g., tuition remission, affiliate faculty status, computers and internet access).

Facilitate the ability of community-based organizations and coalitions to be the lead applicant and fiscal agent for community-based research grants.

Most community agencies would not be competitive against academic institutions as the lead applicant for community-based research grants.

- Provide community-based organizations with training and technical assistance on grants management issues

- Develop new funding mechanisms – community research centers based in community-based organizations or coalitions of community-based organizations.
- Fund community-based organizations directly to facilitate or participate in community-university research partnerships. The need for technical assistance to build community-based organization capacity to manage such grants is frequently mentioned (Cheadle 2002).

Develop funding initiatives that address community-identified research priorities.

- Engage national organizations of community-based organizations (e.g., National Association of Community Health Centers, United Way), community coalitions (e.g., Kellogg Community Voices program, Community Care Networks) and related groups in the process of determining research priorities. This could include sponsoring research forums at their conferences and inviting nominations of representatives to serve on funding agency advisory bodies.
- Develop “requests for proposals” that encompass community-identified research priorities (e.g., in contrast to university-based investigator-initiated research priorities, disease-specific categorical grants).

Require evidence of genuine community partnerships in grant proposals.

Researchers and funding agencies need to do a better job of demystifying research in order to counter the ivory tower stereotype—e.g., the pursuit of knowledge for knowledge’s sake and the lack of community control or benefit. They need to show how research can lead to improvements of community health and benefit the community, but recognize the historical lack of benefit and even destructiveness. In the words of a funding agency program officer we interviewed, we need to ‘demonstrate how community-based participatory research processes and partnerships are a successful approach to research and action. Show that collaboration is not about manipulation, but about sharing the risks and rewards. Tell the story of successful collaborations in a straightforward way without jargon.’

- Require community-based research proposals to demonstrate the nature of the community partnership (or, for planning grants, what the process for developing an authentic partnership will be) and support among the partners. There are a number of nationally recognized principles of partnership that can be incorporated in requests for proposals (Green, George et. al. 2002, Israel 2000, Seifer 2000). Evidence of partner support for the partnership could include university promotion and tenure policies that reward community scholarship, community agency mission and job descriptions that explicitly value teaching, research or university partnerships.
- Require that applicants demonstrate how the proposed research will impact the community – i.e., including a community impact statement in the proposal. The community impact statement could address how the community is involved in the proposed research, how the community will benefit, whether and how jobs or community capacity will be developed, etc. Similarly, research proposals with intervention components should be required to address how the intervention will be sustained, how the results lead to sustainable changes in community practice, how the results will be disseminated to other communities, etc.
- Include a “community partnership” component to all research grants, similar to the community outreach and education component that NIEHS includes in their Center grants.
- Recruit proposal reviewers from among community partners who have experience and expertise in conducting community-based research.

- Expand IRB committee composition to include community partners who have experience and expertise in conducting community-based research.
- Commission community agency partners to draft case studies and stories that demonstrate successful community-university research partnerships and offer guidance to colleagues.

ISSUE #6: Conducting community-based research requires a team with a unique set of knowledge, attitudes, values and competencies that need to be cultivated and supported.

RECOMMENDATIONS:

Invest in the preparation of researchers who have the knowledge, attitudes, values and competencies to successfully conduct community-based research.

As one principal investigator we interviewed said, ‘...this is not taught in the doctoral programs... you need to give up control, be flexible with your methodologies, cultural sensitivity, and even unlearn the old ways of doing research.’

- Expand the number of pre-doctoral and post-doctoral fellowship programs in community-based research. The WK Kellogg Foundation-funded Community Health Scholars Program is the only post-doctoral fellowship program specifically designed to train community-based participatory researchers (CHSP 2002).
- Develop training and professional development programs for individuals who serve as community-university liaisons.
- Establish courses on community-university research partnerships in school of public health. The schools of public health at the University of Michigan, UNC-Chapel Hill and UC-Berkeley currently offer such courses (CBPR 2002).
- Provide grants for faculty development, mini-sabbaticals and training programs for current faculty.
- Develop a cadre of community and academic partners who can mentor less experienced colleagues in principles and processes of community-university research partnerships.

Invest in ongoing training and professional development for all partners.

Initial and ongoing training and professional development opportunities can build capacity of community partners, increase skills and knowledge for academic partners, and provide a solid foundation for a sustainable research relationship. Interview stakeholders suggested a number of specific training topics for strengthening community-university research partnerships, listed below. Suggested mechanisms for providing training in these areas included roundtables, workshops, all day institutes, conferences, and hands-on activities in community settings. Suggestions for post-doctoral training included workshops, partnership retreats, service-learning projects, community-based research projects, graduate level internships and 1-3 year post-doctoral fellowships.

- Partnership processes training for both community and academic partners.
- Research methods and applications for both community and academic partners, with an emphasis on educating community partners on how scientific research can benefit their community and an emphasis on educating academic partners on qualitative methods, community-based participatory research and the effective dissemination of results.
- Conflict resolution for both but especially for academic partners.
- Cultural competency and social justice training for academic partners.

- Community-based participatory research and principles of partnerships training for funding agencies, IRB members and journal reviewers.
- Demystifying the university structure, indirect cost reimbursement and IRB process for community partners.

ISSUE #7: Although pursuing applied research by their very nature, community-university research partnerships do not consistently disseminate their findings for practical application.

RECOMMENDATIONS:

Boost support for research dissemination activities.

- Offer mentor-mentee grants, in which a community-university research partnership that has demonstrated a successful intervention can “mentor” another community to develop and implement a similar approach.
- Convene “research to practice” conferences around specific community health problems and issues for the purpose of disseminating research findings.
- Provide dissemination grants that can support the development and distribution of products (e.g., videos, books, web sites, “train the trainer” workshops, mentoring) specifically designed to disseminate research findings for practical application. In the words of a principal investigator we interviewed, “How to implement results never gets funded. Funders tends to fund implementation of projects and/or further studies.”
- Engage national organizations of community-based organizations (e.g., National Association of Community Health Centers, United Way), community coalitions (e.g., Kellogg Community Voices program, Community Care Networks) and related groups in the process of disseminating research findings. This could include sponsoring “research to practice” forums at their conferences.

ISSUE #8: There is no coordinated educational and advocacy effort on behalf of community-university research partnerships, nor is there a readily accessible “one stop” source of information on these partnerships.

It is apparent from our work that no coordinated education and advocacy effort on behalf of community-university research partnerships exists. A national network of community-university research partnerships could help to move forward many of the recommendations made in this paper, facilitate the ability of policy makers and funding agencies to regularly communicate with “the field,” and facilitate the collection of data on community-university research partnership as well as trends over time.

RECOMMENDATIONS

- Convene a national conference on community-university research partnerships with an explicit agenda to develop a national coalition.
- Establish an online resource center or clearinghouse on community-university research partnerships. This center could be designed for university-based, community-based and funding agency-based users, and include such resources as: principles, best practices, links to relevant funding agency requests for proposals, sample community-university partnership agreements, peer-reviewed journal article abstracts and links, reports on research findings, relevant conference reports, and so forth.

ISSUE #9: There are important unanswered questions about the infrastructure requirements of community-university research partnerships that can form the basis of future research.

As is inevitably the case with projects of this nature, our report raises a number of important unanswered questions and issues that can form the basis of future research. These include, but are not limited to:

- *Better understanding of the importance, nature and role of the community-academic liaison function.* For example, does it make a difference if the university or the community employs a liaison position, if this function is fulfilled by a faculty member, staff person, committee?
- *Better understanding of the time and process needed for building relationships and trust.* For example, can we make any direct connections between the length and/or type of time used to develop the partnerships, trust, relationships, cultural understanding... and positive outcomes for the community? Is there a breaking point when investment in the process does not yield better results?
- *Better understanding of the perspectives of researchers, community-based individuals and funding agencies who are not actively engaged in community-university partnerships.* For example, is there a pool of potential community-based researchers who could be recruited into this field? If so, what is preventing them from pursuing community-based research?
- *Better understanding of how the promotion and tenure process can inhibit or facilitate community-university research partnerships.* For example, what are the career trajectories of principal investigators and other faculty involved in community-university research partnerships, and how do these compare with peers who conduct more traditional forms of research?
- *Better understanding of how the processes and policies of funding agencies can inhibit or facilitate community-university research partnerships.* For example, what difference does recruiting and training reviewers to assess the quality and rigor of community-based research have on the proposals that are submitted and the funding decisions that are made?
- *Better understanding of the impact of implementing recommendations made in this paper,* by evaluating their implementation and outcomes.

COMMUNITY-ACADEMIC LIAISONS FOR COMMUNITY-UNIVERSITY RESEARCH PARTNERSHIPS: THE IDEAL JOB DESCRIPTION

In our discussions with key stakeholders, we found that community-academic liaisons play an essential role in facilitating the research partnership and should ideally be funded through stable funding sources so as to lend stability to the partnership's development. Although each research partnership has a unique set of needs, the job description below provides a general synthesis of the knowledge, skills, and characteristics described and/or desired in this position. It is not expected that any one person would have all the skills and characteristics listed below, nor is it expected that one individual could manage all the outlined tasks. As several of the stakeholders mentioned in their interviews, two people may best fill this position where one individual is based in the community and the other at the university. Furthermore, many of the responsibilities should not be considered the sole task of this position. For example, relationship building should be considered an essential responsibility of all partners.

Possible Titles: Program Manager, Center Manager, Research Broker, Community-Academic Liaison or Coordinator, Partnership Staff
Reports to: Research Partnership, Community Advisory Board, and/or other partnership governing body.

Location: These positions appear to be most often housed in a university building (located on- or off-campus), but this depends on who is the lead organization (e.g., if a community-based organization manages the grant, then likely the program manager will be housed in the community). Space for this position is needed in the community if the position is housed in the university (it is common for people in this position to spend a lot of time in their cars!) Ideally, community-university research partners would have a shared position or two positions, one based at the academic partner's site and one based in the community. This would help build community infrastructure and address concerns about the inequitable distribution of resources.

Key responsibilities:

- **Establishing trust among partners.** Trust and interpersonal relationships are key to the success of community-university research partnerships. Thus, establishing and maintaining trust over time is an important, if not the primary, responsibility.
- **Relationship-building.** For example, coordinating with other colleges and departments, helping to develop/maintain relationships between university and community, staying connected within the community, and helping to build trust among partners.
- **Acting as a bridge.** For example, helping to translate research processes and findings so they make sense in a given community context and keeping the flow of communication open and accessible among partners.
- **Acting as a point person for problem-solving.** For example, connecting university researchers with the right community agency staff person and assisting community partners with subcontracting questions.
- **Supporting the community advisory board.** This includes assisting in the preparation board meeting agendas, sending out board meeting materials, taking and distributing board meeting minutes, touching base with board members between meetings, providing technical assistance to board members, ensuring follow-up on issues raised during board meetings.
- **Developing policies and procedures** in collaboration with partners to assist with the partnership process.

- **Supervising students or research assistants** working with research partnerships.
- **Assisting with the research** or implementation of the project, including report-writing
- **Bringing in new community partners** or assisting community board in bringing in new partners.
- **Supporting new academic partners** and/or supporting the principal investigators as they bring in new academic partners.
- **Balancing demands among partners**, including the pressures to be involved in every community activity and/or confusion over role as advocate or objective staff.

Characteristics:

The ideal candidate is characterized as being a team-player who is encouraging, positive, inquisitive, flexible, resourceful, and passionate about the principles of community-university research partnerships. This is someone who might also be described as open-minded while at the same time being “thick-skinned” (able to tolerate challenges and conflicts). This person will work well under stress and under public scrutiny. The ideal candidate will be able to translate their life experiences and grass roots knowledge into the work of the research partnership.

Knowledge & Skills:

- The ideal candidate will have either **direct personal knowledge of the community** (as defined by the community partners) and/or have a **positive track record** of working collaboratively in community settings. This included placing a high value on community perspectives, knowing the community resources and being known in the community.
- **Interpersonal and facilitation skills**, including sensitivity to community needs; excellent listening skills; good team building and conflict resolution skills; ability to gain people’s trust and to understand/appreciate diverse groups; ability to communicate well in order to keep partners motivated and informed; ability to understand/feel comfortable in both the academic and community setting).
- **Technical skills**, including skills or ability to obtain skills in such areas as planning and organizing, evaluation, research methods and dissemination techniques, writing, computer software programs, and multiple languages. The candidate should also have the ability to negotiate the requirements of the academic partners and funding organizations (e.g., financial procedures, forms).
- **Cultural competency skills**, including the ability to negotiate at all levels of cultural differences: ethnic, socioeconomic, academic/non-academic, bench research/community-based participatory research.
- **Commitment to the substantive issue and the partnership process**, including a desire to see the partnership grow, to see all partners develop to their full potential, and a deep interest in community health issues.

INFRASTRUCTURE DEFINED

For the purpose of this project we defined infrastructure as the sum of those elements that are essential and/or required to support activity leading to successful research processes and outcomes. Underlined are the broad themes identified within the literature, with sub-themes listed below.

Community-university relationship

History of prior community-university relations
History and evolution of current community-university relationship
Nature and extent of the relationship

Policies and procedures

Assessment and continuous improvement policies and procedures
Budget policies and procedures
Communications policies and procedures
Curriculum requirements
Human subjects review policies and procedures
Job descriptions/expectations
Mission statements and strategic plans (for each: university, partner agencies, and formalized partnerships)
Partnership agreements/contracts
Project goals/outcome statements
Recognition/award systems and performance reviews (for each: administrators, faculty, staff, partner agencies)

Financial resources

Diversity of funding sources (e.g., public, private, match requirements)
Diversity of funding types (e.g., planning grant, research grant, dissemination grant)
Funding timeframe (e.g., one year, multi-year, renewable)
How the funds flow (e.g., to university, to community)
Partnership development and planning
Personnel and administration
Resource sharing between community and university
Training and professional development

Human resources

Faculty rank of principal investigators and faculty
Leadership within the community (e.g., CEO, staff, community board members) and the university (e.g., deans, faculty, staff).
Personnel categories (e.g., principal investigators, project managers, community agency staff, community organizers, community health workers, students, administrative and support staff)
Personnel characteristics and competencies (e.g., values diversity, competence in community-based participatory research methods)
Personnel functions (e.g., researchers, grant writers, fundraisers, partnership-builders)
Personnel location (e.g., campus-based, community-based)
Race/ethnicity/gender of research team

Training and professional development (e.g., training for new personnel on partnership processes, training for community on research methods, training for university on community and cultural issues)

"Hard" Infrastructure

Access to libraries and archives
Computers and internet access
Databases, software, & data storage capacity
Interview equipment (video/audio)
Meeting and parking space
Office space and office equipment
Publishing and printing equipment

LIMITATIONS

The methods we used to develop this report had a number of limitations. By emphasizing review articles in the literature review, we relied on other authors' article inclusion criteria and analyses. With additional resources, we hope to be able to read and analyze a more comprehensive set of articles.

The interviews we conducted are a convenience sample, and not a representative sample of stakeholders involved in community-university research partnerships. Also, all interviewees are involved in community-university research partnerships in some way – as principal investigator, program manager, community partner or funding agency program officer. Further, the principal investigators, program managers and community partners we interviewed were all involved in externally funded community-university research partnerships. Although they can certainly speak to (and did speak to) the capacities and infrastructure required to get a new community-university research partnership underway, these responses might be different had we interviewed individuals who were just *considering* getting involved in community-university research partnerships or who were involved in partnerships that were not externally funded.

Time is an inevitable limitation when conducting a project with a relatively quick turnaround time that involves telephone interviews. We had to limit the telephone interviews to 60 minutes with a reasonable number of questions, out of respect for participants' time and to ensure sufficient time for meaningful responses to each question. Not all participants were asked all of the questions we had intended to ask.

ABOUT THE AUTHORS

Sarena D. Seifer is CCPH's founding executive director. She is a research assistant professor in the School of Public Health and Community Medicine at the University of Washington. Her research focuses on the principles and best practices of partnerships between communities and higher educational institutions around education, research, and community/economic development. She is principal investigator of the CDC-funded project, "Examining Community Partnerships for Prevention Research." She will be team teaching a course on community-based participatory research (CBPR) in the MPH program. She serves on the national advisory committee for the Kellogg Community Health Scholars Program, a post-doctoral fellowship program in CBPR.

In 1995, Sarena completed a postdoctoral fellowship program in health policy at the University of California-San Francisco's Center for the Health Professions. While at the Center, she conducted research on medical education policy, physician workforce issues and physician retraining. She retains the title of Senior Fellow at the Center and is an active collaborator on several Center-sponsored projects. Prior to her fellowship, she was a health policy analyst for the Washington State Senate and director of recruitment and retention for a regional association of community and migrant health centers. Sarena is a graduate of Washington University in St. Louis, and received her master's degree in physiology and her medical degree from Georgetown University School of Medicine. After completing her medical education, Sarena served as the American Medical Student Association's legislative affairs director and subsequently as founding director of its Center for Health Policy Studies.

Nancy Shore is working on her doctoral degree at the University of Washington's School of Social Work. Her specific area of interest is looking at the fit between community-based participatory research and human subjects regulations. Nancy obtained her MSW and MPH at the University of Washington, with a focus on maternal and child health. Before returning to school, she worked with families enrolled in a Head Start program.

Stacy L. Holmes joined CCPH as a program coordinator in October 2001 soon after completing her MPA degree at the Daniel J. Evans School of Public Affairs, University of Washington. Her graduate work in public administration focused on nonprofit management, program planning, and evaluation. While at the Evans School, Stacy worked as the Managing Editor for the Nonprofit and Voluntary Sector Quarterly, and completed program evaluation projects for a Justserve Americorps program and the Community Technology Institute. Through her professional and volunteer work, she has focused on community service, public health, social justice, and HIV/AIDS. At CCPH, Stacy administers projects relating to community-based participatory research, including the CDC-funded project, "Examining Community Partnerships for Prevention Research." She also directs the CCPH Awards program; develops training and technical assistance for discipline-specific initiatives in dental/oral health and pharmacy education; participates in mission-related advisory committees; and conducts original research and outcomes evaluation.

ABOUT COMMUNITY-CAMPUS PARTNERSHIPS FOR HEALTH

Community-Campus Partnerships for Health (CCPH) is the only national nonprofit organization devoted specifically to promoting health through partnerships between communities and higher educational institutions. In just five years, the organization has grown to a network of over 1000 communities and campuses across the U.S. and increasingly the world that are collaborating to improve health, particularly of underserved populations. CCPH members are engaged in a variety of community-based teaching and research programs, including many of the national community-based research initiatives that we have drawn upon for this project. As we are not a professional organization of only academic institutions, we are able to effectively incorporate community, student and academic perspectives into all of our activities. Because we are an interdisciplinary organization, we are able to effectively reach audiences across the health professions. CCPH has developed a solid track record of research, evaluation and training programs in community-based teaching and research. Specifically in regard to this project, we have:

- Led a national study of the community involvement of academic health centers;
- Sponsored national conference tracks on community-based participatory research (CBPR);
- Planned and implemented a successful CBPR symposium series in Seattle in fall 2001;
- Provided technical assistance for health professional schools in the areas of CBPR and community-university partnership building;
- Developed resource materials on CBPR, including commissioning review and policy papers for our national conferences and developing web-based resources for faculty to document their community scholarship for review, promotion and tenure;
- Collaborated with associations of health professional schools and of academic health centers to strengthen CBPR; and
- Recently launched a 2-year national project, Examining Community Partnerships for Prevention Research, with support from the Centers for Disease Control Prevention through the CDC cooperative agreement with the Association of Schools of Public Health.

For more information on CCPH, please visit our website at www.ccph.info or contact any of the authors of this paper.

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