



PART FIVE



DOCUMENTATION AND EVALUATION OF PARTNERSHIPS

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In Part Five (Chapter Twelve), we focus on the CBPR phase of documenting and evaluating, on an ongoing basis, the progress of the partnership toward achieving a collaborative process. Given the fundamental importance of partnership formation and maintenance to CBPR, as illustrated by the chapters in Part Two of this book, it is essential to document and evaluate the effectiveness of the process methods used by a partnership (Israel et al., 2003; Lasker, Weiss, & Miller, 2001; Schulz, Israel, & Lantz, 2003; Sofaer, 2000; Wallerstein, Polacsek, & Maltrud, 2002; Weiss, Anderson, & Lasker, 2002).

Using a partnership's CBPR principles as a guide, an evaluation can determine the intermediate outcomes that the partnership can attend to in order to refine and improve its progress toward an effective collaborative process and, ultimately, the accomplishment of long-term outcomes (Lantz, Viruell-Fuentes, Israel, Softley, & Guzman, 2001; Rossi, Freeman, & Lipsey, 1999; Schulz et al., 2003; Weiss et al., 2002). Examples of intermediate partnership outcomes include fosters co-learning and capacity building, involves equitable participation and sharing of influence and power among all partners, and achieves balance between knowledge generation and action. Although the emphasis in Part Five is on assessing a partnership's attainment of intermediate outcomes, it is important to recognize that evaluating the long-term outcomes of a CBPR partnership, such as achieving intervention objectives, is another critical aspect of the evaluation phase. Numerous methods (for example, surveys or focus group

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interviews) are appropriate for documenting progress toward attainment of both intermediate and long-term outcomes.

In Chapter Twelve, Israel, Lantz, McGranaghan, Kerr, and Guzman present a conceptual framework for evaluating the process and impact of CBPR partnerships and discuss the application of this framework by the Detroit Community-Academic Urban Research Center. This conceptual framework identifies the role of several dimensions that affect the extent to which a partnership achieves its ultimate outcomes. Particular emphasis is placed on assessing “structural characteristics,” “group dynamics characteristics,” and “intermediate measures of partnership effectiveness.” To document and monitor change in these dimensions, the chapter authors used two data collection methods: in-depth, semistructured interviews and closed-ended survey questionnaires. They provide insightful details on the structures and procedures used to engage academic and community partners in evaluating the process and impact of their CBPR partnership. They give particular attention to the participatory process of designing and conducting the evaluation, feeding back and interpreting findings, and applying the results to refine and improve the partnership’s adherence to CBPR principles. The authors also examine the challenges and limitations, the lessons learned, and the implications for the use of these methods, all of which are applicable to documenting and evaluating both partnership formation and maintenance and the longer-term outcomes of a CBPR effort.

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CHAPTER TWELVE



Documentation and Evaluation of CBPR Partnerships

In-Depth Interviews and Closed-Ended Questionnaires

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As the number of research and intervention partnerships has increased to address the complex set of determinants associated with public health problems, particularly health disparities, numerous challenges, as well as benefits, of a collaborative approach have been identified (Butterfoss, Goodman, & Wandersman, 1993; Green, Daniel, & Novick, 2001; Israel, Schulz, Parker, & Becker, 1998; Minkler & Wallerstein, 2003; Roussos & Fawcett, 2000). Specifically, researchers have gained an enhanced understanding of the time needed to develop and maintain such partnerships and to show an impact on health outcomes (Israel et al., 1998; Roussos & Fawcett, 2000; Weiss, Anderson, & Lasker, 2002). Therefore it is particularly important that partnerships document and evaluate early on the

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extent to which and the ways in which their partnership process is effective—in adhering to key principles of collaboration for example (Israel et al., 2003; Lasker, Weiss, & Miller, 2001; Schulz, Israel, & Lantz, 2003; Sofaer, 2000; Wallerstein, Polacsek, & Maltrud, 2002; Weiss et al., 2002). A determination of whether and how effectively a partnership is collaborative and participatory (for example, in its project implementation process), and whether and how effectively it achieves its intermediate or impact objectives (for example, those considered essential to attaining ultimate health outcomes), can occur long before it is possible to assess the partnership's impact on health (Rossi, Freeman, & Lipsey, 1999; Schulz et al., 2003). Such information can be used by the partnership to improve its actions and in turn the achievement of its ultimate goals (Lantz, Viruell-Fuentes, Israel, Softley, & Guzman, 2001; Schulz et al., 2003; Weiss et al., 2002).

There are many different types of evaluation—such as process, impact, outcome, participatory, formative, and summative (Israel et al., 1995; Patton 2002; Springett 2003)—and multiple data collection methods—quantitative and qualitative—that can be used for evaluating partnerships (Patton, 2002; Reichardt & Cook, 1979; Schulz et al., 2003; Weiss et al., 2002). The purpose of this chapter is to examine the use of two data collection methods, in-depth, semistructured interviews and closed-ended survey questionnaires, for assessing the process and impact of the collaborative dimensions of community-based participatory research (CBPR) partnerships. We will present a conceptual framework for assessing CBPR partnerships, followed by a brief description of each of these two data collection methods. The application of these methods by the Detroit Community-Academic Urban Research Center will be presented as a case example. Emphasis will be placed throughout on the participatory process used in designing and conducting these methods and in feeding back and interpreting data collected from these two methods for an evaluation of a CBPR partnership. We will examine the challenges and limitations, lessons learned, and implications for the use of these methods.

CONCEPTUAL FRAMEWORK FOR ASSESSING CBPR PARTNERSHIPS

There are a number of theoretical and conceptual models that provide useful frameworks for understanding and assessing how partnerships operate (for example, Butterfoss & Kegler, 2002; Lasker & Weiss, 2003; Schulz et al., 2003; Sofaer, 2000). In our own work we have placed particular emphasis on the importance of a given partnership's adhering to the principles of CBPR—for example, displaying a collaborative, equitable partnership in all phases of the process (see Chapter One in this volume and Israel et al., 1998, 2003)—and

the recognition that success in following these principles and achieving long-term outcomes is dependent on the effectiveness of the group in using its resources and satisfying the needs of group members (Schulz et al., 2003). Therefore the development of the evaluation instruments to be discussed here was based upon an extensive review of the group process literature (Johnson & Johnson, 1982; Shaw, 1981) at the time in which the initial tools were developed in 1985 as part of another participatory action research project (Israel, Schurman, & House, 1989). We selected the priority aspects of groups to assess (such as shared leadership; open, two-way communication; and high levels of trust) based on the characteristics of effective groups delineated by Johnson and Johnson (1982). (See Chapter Three for a discussion of group facilitation strategies that can be used to foster the achievement of these characteristics.)

As shown in Figure 12.1, these characteristics of effective groups have been placed in the context of a conceptual framework for understanding and assessing partnerships (adapted from Sofaer, 2000; Schulz et al., 2003; with additional points from Lasker & Weiss, 2003). (Portions of the description of the model were adapted from Schulz et al., 2003.) Briefly, the extent to which a partnership achieves its ultimate outcomes or outputs (for example, collaborative problem solving or improved community health) is influenced by intermediate measures or characteristics of partnership effectiveness (for example, extent of member involvement and empowerment) that are determined by the partnership's programs and interventions. In turn, these are shaped by the group dynamics of the partnership (for example, communication, conflict resolution, and shared goals), which are also influenced by structural characteristics of the partnership (for example, membership and formalization). All these factors in the framework are shaped by environmental characteristics (for example, geographical and cultural diversity and socioeconomic determinants of health). The items included in the closed-ended survey questionnaire and the in-depth interview protocol that we used were informed by this framework, with particular emphasis on assessing the dimensions of "structural characteristics," "group dynamics characteristics," and "intermediate measures."

GENERAL DESCRIPTION OF DATA COLLECTION METHODS

A number of qualitative and quantitative data collection methods can be used to gather information to evaluate the CBPR partnership process (Denzin & Lincoln, 2000; Nardi, 2002; Patton, 2002). It is our premise that the evaluation questions and priorities (identified through a participatory process) are what should determine the type of evaluation being conducted and the data collection methods being employed. Given the conceptual framework described earlier and the evaluation objectives that have emerged in our work, we have relied

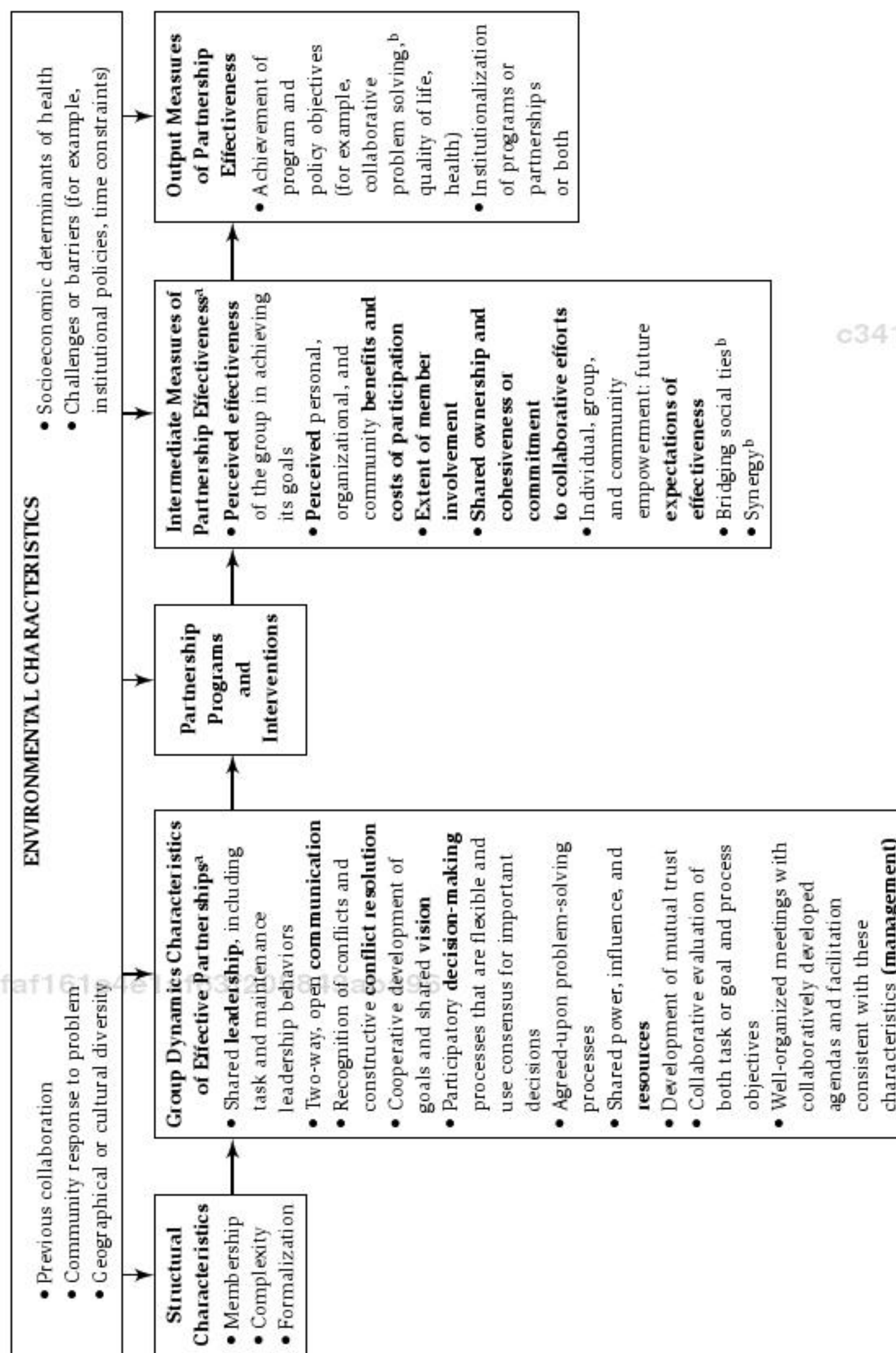


Figure 12.1 Conceptual Framework for Understanding and Assessing the Effectiveness of the CBPR Partnership Process.

^aAs presented in Schulz et al., 2003. Italicized and bolded items derived from Johnson & Johnson, 1982, 1997, and also included in Sofaer, 2000. Other items derived from Johnson & Johnson, 1982, and not included in Sofaer's model.

^bDerived from Lasker & Weiss, 2003.

Source: Adapted from Lasker & Weiss, 2003; Schulz et al., 2003; Sofaer, 2000. Portions reprinted from Schulz, A. J., Israel, B. A., & Lantz, P. M. (2003). Instrument for evaluating dimensions of group dynamics within community-based participatory research partnerships. *Evaluation and Program Planning*, 26(3), 249–262. Copyright (2003), with permission from Elsevier.

primarily on two types of data collection methods: *in-depth, semistructured interviews* and *closed-ended survey questionnaires*.

In-Depth, Semistructured Interviews

There are a number of approaches to the design of one-on-one, qualitative interviews, and different authors use different terms and definitions in describing them, such as *informal conversational interview* and *standardized open-ended interview* (Patton, 2002). Among the areas in which key distinctions occur across these approaches are the comparative degree of formality or informality, the decision to use fully specified questions or to use topic guidelines, and the degree of flexibility in phrasing questions (asking all respondents the same questions or employing some variation). One of the strengths of all these approaches is the emphasis on asking open-ended questions, with follow-up probes as necessary, that allow the respondent to provide an in-depth explanation of the issues being addressed (Patton, 2002). In addition to the way the questions are asked, such aspects as whom to interview, where to conduct the interview, note taking, tape recording, informed consent and confidentiality, cross-cultural dimensions, and data analysis approaches (Patton, 2002) have to be considered in conducting qualitative interviews.

The focus of this chapter is on the use of the in-depth, semistructured interview, which is aimed at gaining an in-depth understanding of a given phenomenon without imposing any categorization of responses that might limit the inquiry (Fontana & Frey, 2000). (See Chapter Four for a discussion of the use of in-depth key informant interviews.) In-depth, semistructured interviews use a standard set of prespecified, open-ended questions, with follow-up probes to obtain the desired depth of understanding, and allow questions to be asked somewhat differently, if necessary. The advantages of this approach are that all participants are asked similar questions, hence increasing comparability and completeness of responses; there is a degree of flexibility in adapting the questions to particular individuals and contexts; interviewer effects are reduced (when more than one interviewer is involved); and evaluation users may review and shape the interview protocol (Patton, 2002). The disadvantages are that the wording of questions might constrain the relevance of the questions and answers and the comparability may be reduced if all questions are not asked in exactly the same way (Patton, 2002).

Closed-Ended Survey Questionnaires

The closed-ended survey questionnaire is one of the most frequently used methods for gathering information in a systematic and quantitative fashion (Fink & Kosecoff, 1998; Fowler, 2001; Nardi, 2002). Although questions may be asked in different ways, with different response categories, the key dimensions are the

use of a predetermined set of questions that are asked of all respondents and the provision of a set of specified response categories into which the respondents' answers have to fit (Fink & Kosecoff, 1998; Nardi, 2002). In addition to the questions themselves, a number of other dimensions of survey questionnaires have to be considered: whom to interview and how the individuals are selected, use of face-to-face or self-administered modes, informed consent and confidentiality, language and translations, number of respondents needed for purposes of statistical power, and use of a cross-sectional or longitudinal approach (Fowler, 2001; Nardi, 2002). (See Chapter Five for an examination of a random sample survey conducted using a CBPR approach.)

APPLICATION OF METHODS TO DETROIT COMMUNITY-ACADEMIC URBAN RESEARCH CENTER

In this section we present a case example, involving the Detroit Community-Academic Urban Research Center, of the use of in-depth, semistructured interviews and a closed-ended survey questionnaire for evaluating the partnership. The partnership's background, goals and objectives, design issues, and implementation steps are discussed in the following sections.

Partnership Background

The Detroit Community-Academic Urban Research Center (URC) is a CBPR partnership of community-based organizations, public health and health care institutions, and academia (the note at the beginning of the chapter lists the organizations). The URC partnership began in 1995, with core funding from the Centers for Disease Control and Prevention (CDC), as part of that agency's Urban Research Centers Initiative (Higgins, Maciak, & Metzler, 2001). The URC is governed by a board that meets monthly and is made up of representatives from each of the partner organizations. During the first two years of its existence, the board adopted a set of CBPR principles that guide its work, and it determined the partnership's mission, goals and objectives, its operating norms and values, and the public health priorities it would address (Israel et al., 2001).

At the first meeting of the board, members engaged in a facilitated discussion in which they identified factors that contributed to effective groups they had belonged to, and they discussed and adopted specific factors as the operating norms that they wanted the URC board to follow (Israel et al., 2001). These norms included: mutual respect, everyone participates, shared leadership, conflicts are brought up and discussed, everyone listens, meetings not dominated by a few members, members agree to disagree, and decisions are made by

consensus (Israel et al., 2001). These norms are very similar to the characteristics of effective groups identified in the literature (Johnson & Johnson, 1982, 1997; see also Chapter Three in this volume) and depicted in Figure 12.1. These norms were distributed in print at a subsequent board meeting, were periodically reviewed, and were used to guide the development of the items in the closed-ended questionnaire used to evaluate the CBPR partnership process (for example, items on leadership, participation, and decision-making procedures).

The URC operates primarily in selected neighborhoods in east and southwest Detroit in which approximately 125,000 community members reside. The east-side is predominantly African American and the southwest area of the city is where the largest percentage of Latinos reside.

Goals and Objectives of the URC

The overall goal of the URC is to establish and maintain an effective partnership to conduct community-based participatory research. Specific objectives include: to conduct CBPR projects as identified by the partner organizations; to increase knowledge about the principles and conduct of CBPR; and to educate policymakers and funders on the public health policy implications of the knowledge gained through CBPR projects.

The URC has received over \$27 million in federal and foundation funding to conduct over sixteen CBPR projects. Each of these URC-affiliated projects has its own steering committee, comprising representatives from some of the same partner organizations as are involved on the URC board as well as organizations of relevance to the particular focus of the project. Project topics have included diabetes management and prevention, environmental factors associated with childhood asthma, access to health care, and social determinants of health.

Evaluation Design and Role of the Evaluation Subcommittee

The overall research design for the URC evaluation is the case study. A case study provides an in-depth analysis of the different aspects of a program and is an appropriate design for assessing an ongoing, complex phenomenon in its real-life context (Yin, 1984). The URC evaluation approach is both participatory and formative (Israel et al., 2001; Lantz et al., 2001), involving program participants and staff in multiple components of the evaluation process (Cousins & Earl, 1992; Springett, 2003). Members of the URC board have played a critical role in the design, implementation, interpretation, and dissemination of the evaluation results. Thus this evaluation approach adheres to the URC's CBPR principles (Israel et al., 2001, 2003). This participatory approach recognizes that the board members' active involvement in the evaluation enhances the relevance and increases the usefulness of the results.

Funding for the URC began in October 1995, and the first meeting of the board was held in December 1995. Board members participated in the selection

of the person who was to serve as the evaluator. The person selected, a University of Michigan School of Public Health (SPH) faculty member, started attending board meetings in the middle of the first year. After attending two meetings, she presented to the board some ideas regarding different directions that an evaluation could take and proposed that an evaluation subcommittee be established. The overarching purpose of the subcommittee was to create a mechanism through which some of the board members would participate outside the monthly meetings in the development of an evaluation plan, which would subsequently be recommended to the entire board. The intent was that subcommittee members would meet in person and by conference call in order to discuss potential evaluation questions and strategies, assist the evaluator in crafting an evaluation proposal, review draft documents and data collection instruments, and help lead discussion of proposed evaluation efforts at full board meetings.

While URC board members were committed to evaluation and believed it to be important, given the other demands and constraints on their time, no nonacademic partners volunteered initially to participate on the evaluation subcommittee when the evaluator solicited volunteers at two different board meetings. Subsequently, the evaluator contacted two board members representing community-based organizations and asked them individually if they would be willing to join the subcommittee, and they both agreed. They had prior experience with evaluation research in their organizations and were vocal, active members of the board. Thus, during the URC's first year, the evaluation subcommittee was established, made up of representatives from academia (the evaluator, another SPH faculty member on the URC board, and a graduate student research assistant), one representative from a community-based organization in eastside Detroit, and one from southwest Detroit. After several years, as the board became more established, the subcommittee was less involved as a separate entity, and the evaluator brought evaluation issues to the entire board for discussion and resolution.

In addition to being participatory, the evaluation design is formative, which means that the results of the evaluation have been shared with the board members on an ongoing basis, and the board members have been involved in the interpretation and application of the evaluation findings (Patton, 2002; Rossi et al., 1999). The evaluation approach also applies both process and impact evaluation (Israel et al., 1995; Patton, 2002). A *process evaluation* assesses the extent to which a program has been carried out as planned and with the level of quality intended (Israel et al., 1995). An *impact evaluation* assesses the extent to which a program is effective in achieving changes in targeted mediators (Israel et al., 1995).

As described earlier, two main objectives of the URC board are to increase the knowledge of and use of CBPR and to improve health through the conduct

of CBPR projects in eastside and southwest Detroit. Having an effect on and assessing ultimate health outcomes takes considerable resources over a long period. Therefore the evaluation approach used focuses on impact indicators, or *targeted mediators*, that are more readily assessed and provide a logical link or pathway between the intervention (that is, the URC processes and core activities) and the ultimate outcomes. The identification of the explicit targeted mediators and how they are connected is referred to as a *logic model* in evaluation research (CDC, 1999; Yin, 1984). Although the evaluation was not guided by a logic model per se, the in-depth interview guide and survey questionnaire were informed by the conceptual framework presented in Figure 12.1.

As is typical in case studies, multiple methods for data collection (quantitative and qualitative) and multiple sources of information have been used to understand the process by which the URC has developed and worked toward meeting its objectives, to provide feedback on an ongoing basis to board members, and to assess the impact of the URC. The use of multiple methods increases the types of information collected (Patton, 2002; Yin, 1984) and enhances the validity of the conclusions by revealing areas in which there is convergence across data and areas in need of further investigation because findings do not converge (Denzin & Lincoln, 2000; Israel et al., 1995).

As suggested by Yin (1984), three principles of data collection for case studies have been used in evaluating the URC:

1. Use multiple sources of evidence, also referred to as *triangulation*
2. Develop a well-organized database
3. Maintain a chain of evidence that is consistent with the conceptual framework for the partnership (Figure 12.1)

The set of data sources used includes in-depth, semistructured interviews; closed-ended survey questionnaires; field notes of URC board meetings; documents and correspondence generated by the URC; and minutes from board and subcommittee meetings (Lantz et al., 2001).

In-Depth, Semistructured Interviews

Development of Interview Protocol. During the first year of the board's operation (1996), the evaluation subcommittee met two times outside of monthly board meetings to discuss evaluation design issues. The subcommittee decided that it wanted to obtain in-depth information from board members and that individual, face-to-face interviews would be the most effective way to do so. The subcommittee members discussed the advantages and disadvantages of the use of in-depth, semistructured interviews (as outlined in the literature and described earlier) and decided that this was the approach they wanted to use. They decided that a standard set of open-ended questions would be identified,

with appropriate follow-up probes, with the understanding that the evaluator would be flexible in the actual asking of the questions, changing wording as appropriate and eliminating questions if necessary.

The evaluator shared with the evaluation subcommittee members a draft of questions based on both their discussions of topics that they wanted to be included and the characteristics of partnerships as outlined in the literature (as depicted in Figure 12.1). These draft questions were discussed and then revised based on the guidance of the subcommittee. For example, subcommittee members wanted a clear distinction between benefits gained by individuals and those gained by organizations when gathering information regarding perceived benefits of participating in the partnership, and questions were added accordingly. The topics that were covered in the interview questions included expectations and hopes for the first year and whether they were met; major accomplishments, barriers, and challenges and recommendations for meeting them; personal knowledge or skills gained; tangible benefits from an organization's affiliation with the URC; and examples of exchanges of information or assistance or support between partner organizations (see Appendix G for the interview protocol).

These in-depth interviews were conducted again with members of the URC board in 1999 and 2002. Many of the same questions were asked, and in 1999, based on discussions with the evaluation subcommittee and the URC board as a whole, questions were added to address several topics of particular interest. The new topics covered factors that facilitated accomplishments, establishment of new relationships among partner organizations, assessment of the role of the Centers for Disease Control and Prevention (CDC), and recommendations to other partnerships on what went well and what to do differently (see Appendix G). Some of these topics were added because the URC was participating with the CDC and two other URC sites in a cross-site evaluation that year (Metzler et al., 2003). In 2002, one of these "new" topics (factors that facilitated accomplishments) was retained in the interview protocol, and several other topics were added, based on discussions with the URC board, that were especially germane to the board at that time. These topics addressed benefits of the URC to the community and ways to improve benefits; costs to or problems for an individual or an organization because of affiliation with the URC, and considerations if funding were to end and options for future funding (see Appendix G).

Data Collection. The first set of interviews was conducted in late 1996 with current board members ($n = 15$), former board members ($n = 3$), and staff ($n = 5$), for a 100 percent response rate (Lantz et al., 2001). The second set was conducted in late 1999 with current board members ($n = 15$) and staff ($n = 3$), for a 100 percent response rate (Lantz et al., 2001). The third set was conducted in 2002 with 16 board members and staff, for an 84 percent response rate.

The interviews were conducted by the evaluator with a graduate student assistant and were documented through verbatim field notes that they each took. The interviews conducted in 2002 were also tape-recorded. The interviews averaged one hour in length and for board members were carried out most frequently in the member's place of work. The interviewees signed a consent form and were guaranteed confidentiality.

Data Analysis. The two sets of written notes taken at each interview were reconciled and then transcribed (Lantz et al., 2001). In 2002, audiotapes were used as a backup to supplement the handwritten notes taken during the interview. Using a qualitative data analysis approach of *open coding* (Strauss and Corbin, 1990), the transcripts were reviewed systematically by the evaluator and her assistant, and categories that captured embedded concepts or meanings were identified from within the interviews as a whole as the data were reviewed (not beforehand) and then compared across the interviews (Patton, 2002). The results of the qualitative data analysis were also stratified by subgroup (university-based and Detroit-based board members) to identify similarities and differences in responses. Due to the small numbers and issues of confidentiality, the results were not further subdivided, for example, by responses from Detroit-based community-based organization partners and from health service provider partners.

Data Feedback, Interpretation, and Discussion. Several months after the completion of the first set of interviews, the evaluator presented the results to the evaluation subcommittee members for their review and comment. Using their input, the evaluator developed a six-page report of evaluation results that she presented to the entire board at one of its monthly meetings. The findings were organized according to the topics covered in the interview protocol, for example, expectations, accomplishments, and challenges and barriers. The results were presented for all of the interviews combined, except where there were meaningful differences in the ways university-based and Detroit-based board members responded. For example, several university respondents reported that their main expectations for the first year of the partnership related to the goals of establishing a common agenda and developing processes and infrastructure for the board. However, only two Detroit partners expressed similar expectations; the majority of community partners stated that their primary expectation was to see new CBPR projects implemented during the first year, particularly in southwest Detroit.

The results of the interviews conducted in 1999 and 2002 were organized by question and presented by the evaluator to the board, using a PowerPoint presentation format. In addition, from her overall analysis of the data the evaluator identified a set of "issues for ongoing discussion" that were highlighted and discussed by the board. For example, an issue addressed in both 1999 and 2002 was the degree to which people believed resources were fairly distributed among

organizations participating in the URC. During the data collection process for the evaluation, a number of respondents raised concerns regarding perceived inequities in financial and other benefits of URC participation, with the main concern being that the academic partner seemed to be benefiting disproportionately when compared to the community partners. Information regarding this concern was presented to the board and became a springboard for ongoing discussions and action on a number of related issues (Lantz et al., 2001).

Program Changes Based on In-Depth Interview Results. Although the focus of this chapter is on the data collection methods themselves and their application within the context of CBPR, and not on the results per se, given the important formative evaluation dimension of this approach, an example is provided here of how the results of the in-depth interviews were used to guide changes in the URC. One finding from the first set of interviews was a suggestion by several of the Detroit partners that they would like to see the partnership expand to include a broader range of community partners. When this was reported to the board, it was decided that this issue should be considered in more depth. Over several meetings the board discussed the potential benefits and disadvantages of adding new community partners and reached a consensus that it did not want to do so at that time but that it wanted to revisit the issue a year later. In the subsequent wave of interviews, this topic was again identified, and at that point the board decided it wanted to add new community-based organizations to the partnership.

In addition to bringing about program changes, the interview findings were also used to identify and disseminate lessons learned and recommendations for conducting CBPR. Several articles have been published based on these data (Israel et al., 2001; Lantz et al., 2001; Metzler et al., 2003), and numerous presentations have been made at professional meetings. In addition, technical assistance and invited workshops have been provided that draw on these evaluation results. All the dissemination activities have included community partners and academic partners as coauthors and copresenters. Although the university partners have most often assumed the role of writing the first drafts of publications and presentations, given that they are expected to write and are compensated for writing as part of their jobs, the community partners have played key roles in team discussions deciding on the initial content and in the subsequent reviewing and editing of manuscripts and presentations. (See Chapter Thirteen for a discussion of dissemination issues in a CBPR context.)

Closed-Ended Survey Questionnaire

Development of Survey Questionnaire. At the end of the URC's first year, during the evaluation subcommittee's discussions of the design of the evaluation, subcommittee members decided that in addition to the semistructured, in-depth interviews, they also wanted to use a closed-ended survey questionnaire

with the board members. The purpose of the survey was to assess, in a standardized fashion, the partners' impressions about and attitudes toward different aspects of the URC partnership's efforts (Lantz et al., 2001). Drawing on the operating norms generated and adopted by the board from characteristics of effective groups (described earlier), on the literature on partnership effectiveness factors (as discussed and depicted in Figure 12.1), and on the CBPR principles and specific objectives of the URC, and building on a questionnaire initially developed and revised in the context of two other participatory research efforts (Israel et al., 1989; Schulz et al., 2003), the evaluator drafted a questionnaire that was initially reviewed and revised by members of the evaluation subcommittee. (See Appendix H for the survey questionnaire.) The questionnaire uses mostly Likert scale response categories (for example, ranging from "strongly agree" to "strongly disagree") and, in accordance with Figure 12.1, includes items related to

- Structural characteristics, such as meeting organization, facilitation, and staffing
- Group dynamics characteristics, such as leadership and open communication
- Intermediate measures of partnership effectiveness, such as effectiveness in achieving the group's goals, general satisfaction, benefits of participation, and sense of ownership or belonging to the group (Schulz et al., 2003)

The survey questionnaire has been administered at four different times, with each version including all the items on the initial questionnaire. Additional items were included in subsequent years to assess more specifically levels of trust, decision-making procedures, the degree to which CBPR principles are followed, role of the funder, and accomplishments or impact of the group (see Appendix H).

Data Collection. The survey questionnaire was mailed to all board members, along with a postage-paid return envelope, in 1997, 1999, 2001, and 2002, and response rates were 100 percent, 100 percent, 95 percent, and 86 percent, respectively. Across the years the board numbered approximately twenty individuals, representing ten organizations and institutions. The self-administered questionnaire took about fifteen to twenty minutes to complete.

Data Analysis. The analysis of the data from the survey questionnaires was carried out by the evaluator and involved descriptive statistics (that is, frequency distributions and comparison of means). For each of the surveys the data were analyzed for the entire sample and for the two main subgroups: university-based board members and Detroit-based board members. Given that the overall

number of board members is so small ($n = 20$), no statistical tests of significance were computed when comparing results across the subgroups. Rather, the results were examined to identify any patterns that were different across the two main partner groups. Similarly, comparisons of the frequency distributions for all respondents for the same questionnaire items were made across the years that the surveys were conducted.

Data Feedback, Interpretation, and Discussion. The results of the analysis of both the initial survey administration and the initial in-depth interviews were included when the evaluator shared the evaluation findings with the evaluation subcommittee and developed the first feedback report (described earlier) and subsequently shared the findings with the board. At this time the frequency distributions for all the questionnaire items were provided to the board, along with a verbal summary of the key findings. In subsequent years, at a regularly scheduled board meeting, the evaluator provided the frequency distributions for all the items and presented PowerPoint slides of key findings across major question categories (for example, perceptions of trust, decision making, general satisfaction, and perceived impact). Major differences that were found over time and between the university partners and the Detroit partners were highlighted. For example, in 1999, 53 percent of the board members agreed with the statement, "I have adequate knowledge of the URC budget, URC resources, and how resources are allocated," and in 2001, 70 percent agreed. In further examination by subgroup in 2001, it was noted that 100 percent of the university respondents agreed, whereas only 43 percent of the Detroit partners agreed. The board engaged in a series of discussions following the presentation of these results. One result of these discussions was the decision to present budget and other financial information to board members on a more regular schedule and in a manner that is transparent and allows time for discussion.

Program Changes Based on Survey Questionnaire Results. A number of program changes have been made over the years based on the results of the closed-ended survey questionnaires (Lantz et al., 2001; Schulz et al., 2003). For example, the survey asked whether (1) "certain individuals' opinions get weighed more than they should" and whether (2) "one person or group dominates at URC board meetings." In 1997 and 1999, the responses of those who agreed or strongly agreed with the first statement were 50 percent and 53 percent, respectively. In 1997 and 1999, the same responses to the second statement came from 28 percent and 42 percent of the group, respectively. There was no clear pattern regarding the person or group thought to dominate, but in discussion of these results at the board meeting, concern was expressed that changes needed to be made and that everyone needed to pay attention to fostering more equitable levels of participation. The facilitator of the board

meetings tried consciously to encourage all members to participate actively at these meetings. In 2001 and 2002, the responses to the first statement were considerably lower (18 percent and 13 percent, respectively), as were the responses to the second statement (24 percent and 19 percent, respectively).

In addition to spurring these program changes, the findings have been used to contribute to the literature on CBPR (Israel et al., 2001; Lantz et al., 2001; Schulz et al., 2003) and have been incorporated into presentations at professional meetings and into invited workshops. This use of the data is particularly important given that one of the stated objectives of the URC is to increase and disseminate knowledge about the principles of CBPR and how to conduct such research.

CHALLENGES AND LIMITATIONS

In the course of our evaluation activities, we have identified challenges and limitations in the use of both in-depth interviews and closed-ended questionnaires. Although in-depth interviews provide rich information that can contribute to an enhanced understanding of the phenomenon being investigated, they are extremely labor and time intensive and require considerable skill on the part of the evaluator. The time needed to conduct the analysis is particularly challenging in that it means the results may not be presented until several months after the data have been collected, which can be frustrating for the partners because they are waiting for the results and because changes can occur over that time period that might make the results less relevant.

Two of the difficulties related to the use of closed-ended questionnaires are associated with the method itself. First, the use of closed-ended questions limits both the responses that can be provided and the issues that can be addressed (Schulz et al., 2003). Furthermore, the wording and interpreting of the questions themselves can be problematic. It is likely that not everyone interprets each question or the response categories in the same way. As one community member emphasized at a board meeting, some people are not going to indicate the best or most positive response category for most items simply because they believe "there is always room for improvement. This doesn't mean, however, that we have big problems."

Given the small number of members in most partnerships and the turnover that occurs, several challenges and limitations arise in the data analysis of closed-ended questionnaires. First, only simple descriptive statistics can be used, and it is not possible to apply tests of statistical significance to assess whether there have been any changes over time (Schulz et al., 2003). Second, we chose to assess change in the group as a whole over time by aggregating the results across respondents at two points in time, rather than tracking change in

individual respondents over time. Although such an approach is useful for capturing what is occurring within the group over time, if there are any changes it is not possible to determine whether they are due to changes in group membership or events that have happened in the group or events that may have had an impact on some members of the group but not others (Schulz et al., 2003).

A second challenge that relates to partnership size and data analysis applies to the use of interviews as well as questionnaires. It is the inability to analyze the data by many different subgroupings. It is critically important to guarantee confidentiality, and the analysis of data by small subgroups would run the risk of exposing the responses of individual group members (Schulz et al., 2003). Hence, although we were able to analyze the data for two categories, university-based and Detroit-based partners, we were not able to further examine the data by Detroit-based health providers and Detroit-based community-based organizations. There might have been some important differences there that we were not able to identify. Similarly, it would be valuable to analyze the results based on other factors that might contribute to the responses, such as the length of time someone has been a member and his or her level of participation in the group, and this may not be possible with the small numbers involved (Schulz et al., 2003).

A third challenge, and one that also applies to both data collection methods, is the time constraints on the partners involved. Participating in the in-depth interviews in particular, but also completing the closed-ended questionnaire, can place time pressures on the partners' already busy schedules. This can cause additional strain on the evaluator who may have to be persistent with members in order to collect the data, which can in turn create tension in the relationships between the evaluator and the members.

Related to this point is the concern that the role of the evaluation subcommittee, the time spent by the members, and the level of participation of those members were all diminishing over time. Some of this was due to the time constraints on all the members, and the difficulty of attending yet another meeting. Over time, the board as a whole served more in this participatory role, and the evaluator brought questions to the entire board rather than the subcommittee.

Another specific area of concern was the subcommittee's and the board's lack of involvement in the data analysis. In accordance with the URC's principles of CBPR, the board promotes the involvement of all partners "as appropriate in all major phases of the research process" (Israel et al., 2001, p. 19). Although the evaluator certainly considers it "appropriate" for the community partners to be involved in the data analysis, a decision was made not to do so in this instance due to the confidential nature of the responses. Given the small number of respondents for both the closed-ended questionnaire and the in-depth, semistructured interviews, it would not have been possible for community partners to review and analyze the data without identifying who the respondents

were, and this would have violated confidentiality. Importantly, as described earlier, the evaluation subcommittee and board members were actively involved in a number of meetings in which the results of the data were fed back and the members engaged in discussions to interpret the findings.

Finally, although these two data collection methods have provided a wealth of information for assessing the URC partnership process, there may be important dimensions that they do not measure. For example, as indicated in Figure 12.1, drawing on the work of Lasker and colleagues (Lasker & Weiss, 2003; Lasker et al., 2001), we consider *synergy*, defined as the actions and products that a partnership can create when its members combine their skills and resources, to be an intermediate measure of partnership effectiveness. However, to date, we have not directly measured this concept with either the interview protocol or the survey questionnaire.

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LESSONS LEARNED AND IMPLICATIONS FOR PRACTICE

Given the strengths and limitations of the evaluation approach presented here, we recommend the use of multiple methods (for example, both closed-ended survey questionnaires and in-depth, semistructured interviews) as a way to complement and enhance the knowledge gained from any one method. It is often suggested that these methods can be used sequentially, for example, qualitative interviews may be conducted first and used to inform the development of closed-ended survey questionnaires, or qualitative interviews may be conducted after a survey is administered to assist in explaining the meaning of the quantitative data (Denzin & Lincoln, 2000; Israel et al., 1995). It is also frequently suggested that these methods can be used simultaneously, allowing triangulation with the results of both methods to assess convergence as well as differences in the findings (Denzin & Lincoln, 2000; Israel et al., 1995). With the evaluation of the URC board, the initial interviews and questionnaires were conducted within several months of each other, and the data were analyzed and the results presented at the same time. The two methods were used nearly a year apart in subsequent years. This approach was beneficial in that there was an assessment annually that obtained useful information, using one method or the other, and it was not as demanding on everyone's time as annual in-depth interviews would have been. Furthermore, the closed-ended survey questionnaires provided standardized data, which could be compared over the years, and the in-depth interviews allowed issues that were not covered in the survey questionnaire to be identified and discussed. In addition to these two methods, we also collected and analyzed other data (for example, field notes of meetings) that further enhanced the quality and validity of the findings (Lantz et al., 2001).

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As depicted in Figure 12.1, a general set of issues is applicable across partnerships, and these issues can guide the development of interview protocols and survey questionnaires. It is important that a partnership develop its own conceptual framework or logic model, and the specific questions asked need to be tailored to the context and the culture of the partnership. For example, with the URC board, the collectively determined operating norms that grew out of group members' experiences with effective groups suggested many of the questions included in the closed-ended questionnaire. This joint process also served to enhance the partners' buy-in and sense of ownership when it came to the evaluation (Schulz et al., 2003). It is also necessary to recognize that the instruments themselves and the questions asked are part of an iterative process, with revisions and additions made over time as the partnership evolves.

This tailoring of the evaluation to the specific partnership is particularly critical for partnerships that include members from diverse communities and ethnic groups. Given the long-standing inequities that exist and the understandable mistrust of research in communities of color (Israel et al., 1998), an assessment of the partnership process needs to examine, for example, the extent to which community partners are engaged on an equal power basis (Wallerstein, 1999), the reasons and incentives for members to "come around the table," how and why diverse interests work together for common goals, and the challenges and opportunities provided by the partnership for serving different interests in diverse communities.

The use of an evaluation approach that is participatory is particularly important in the context of a CBPR partnership. The active involvement of all partners in the evaluation is consistent with the core principles of CBPR. Every partnership needs to decide how it wants this participatory process to occur. For example, it may be decided that an evaluation subcommittee is needed to work closely with the evaluator or that the entire partnership will serve in that capacity. Furthermore, a partnership may decide that it is interested primarily in influencing and being involved in the data collection, interpretation, and dissemination activities but not in data entry and data analysis per se. What is critical here is that the partnership as a whole makes these decisions, rather than the evaluator or academic partners.

Related to this concern, the formative component of the evaluation, with its emphasis on ongoing feedback and group interpretation of the data, is particularly germane when evaluating a CBPR partnership. This feedback and interpretation, and any subsequent actions based on the results, need to occur in a timely manner. Given the volume of data collected, it is necessary to be selective in presenting and discussing results in meetings with the partnership as a whole. Here again, the evaluator needs to work with a subcommittee or the entire partnership to determine what criteria to use in selecting the findings to

present (Schulz et al., 2003). There are several possible ways to determine what results to feed back:

- Identify items or issues in which substantial changes appear to have occurred between years
- Conversely, select items or issues where there has been considerable stability over time
- Choose differences that occur across subgroups, for example, academic and community partners (Schulz et al., 2003)

The evaluation of a CBPR partnership's process and impact needs to begin as soon as possible and continue throughout the duration of the partnership. It is important to recognize that the collection of baseline data, in the traditional sense, is not possible because by the time of the first data collection point, a partnership may well have been working together for a year or more. Therefore it is valuable to begin documenting the efforts of the partnership (for example, through field notes of meetings) as soon as possible. In addition, the first major data collection point (for example, in-depth interviews or a survey questionnaire) becomes a key time with which all subsequent data results can be compared. The ongoing collection of data using similar methods then provides beneficial information for assessing the partnership's progress over time. With the URC board, we have now been able to compare the responses to closed-ended questions over four points in time, and it has been quite compelling to see, for example, that whereas 72 percent of the board in 1997 indicated that they agreed or strongly agreed that the board had been effective in achieving its goals, this number increased in 1999 to 95 percent and was 100 percent in both 2001 and 2002. In addition, the first time that the in-depth interviews were conducted, one of the major "challenges" identified was bringing the southwest and eastside communities together for a common purpose. When the interviews were conducted subsequently, one of the major "strengths" identified was that the Latino community (southwest Detroit) and the African American community (eastside Detroit) were working together on common issues for the first time in the history of the city. Thus it is clear that the use of these data collection methods needs to extend beyond capturing only a snapshot at one point in time to capturing multiple points in order to assess the dynamic, evolving partnership process and its impact.

The application of these two data collection methods requires an investment in time and resources on the part of the partnership. Ideally, where external funding is involved, some of the costs can be budgeted for up front. Although this might be seen as taking resources away from other program functions of the partnership, the knowledge gained and changes made can contribute greatly to the effectiveness of the partnership. Here again, this needs to be a topic that is

discussed openly by the partners. Furthermore, given that the resources needed often involve the group members' time, the partnership needs to decide the extent to which and the ways in which this time commitment can be managed and members compensated for it.

CONCLUSION

Given the growing emphasis on the use of partnership approaches, particularly CBPR, to address health problems and eliminate health disparities, the evaluation of the partnership process is critical for improving partnership functioning and enhancing the likelihood of partnership success. In this chapter we have examined the use of two methods for these purposes, in-depth interviews and closed-ended survey questionnaires, using the Detroit Community-Academic Urban Research Center as a case example. There are a number of useful resources, measurement instruments, workbooks, and Web-based materials available for partnership evaluation purposes (for example, Fawcett et al., 2000; Francisco, Paine, & Fawcett, 1993; Goodman & Wandersman, 1994; Hardy, Hudson, & Waddinton, 2003; Ontario Healthy Communities Coalition, 1999; Sofaer & Kenney, 1996; Sofaer, 2000; Wallerstein et al., 2002; Weiss et al., 2002). The critical component is that all members of the partnership play a key role in the evaluation process (design, implementation, interpretation, dissemination, and so forth), and that the methods used are developed in accordance with the local context, culture, and goals of the partnership. As more such evaluations are conducted, researchers and communities will gain an increased understanding of the factors that contribute to effective community-based participatory research partnerships, and the strategies for affecting these factors in ways that contribute to improved health and quality of life.

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PART SIX



FEEDBACK, INTERPRETATION, DISSEMINATION, AND APPLICATION OF RESULTS

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Part Six focuses on four components of the “final” phase of the CBPR process—feedback, interpretation, and dissemination of research findings and the application of findings to guide the development of interventions and policy formation. Feedback and interpretation of findings involve all research partners and participants in reviewing results from data analysis in order to share their reactions and possible corrections as well as their interpretation of what the results may mean in the context of their community. As Stoecker (2003) notes, although it is optimal for data analysis to be done collaboratively by all research partners, at the very least data analysis should be done with strict accountability to the community. Such accountability can be ensured by feeding back results to the community to engage them in reacting to the findings, including correcting findings and offering their interpretation of what these findings mean for their community.

Equally important to the CBPR process is the dissemination of findings to all research partners and communities through multiple venues and in ways that are understandable, respectful, and useful (Israel, Schulz, Parker, & Becker, 1998). Moreover, dissemination of results is an increasing requirement of funding agencies (Green et al., 2003; Ammerman et al., 2003) and an expectation of study participants and their communities (López, Parker, Edgren, & Brakefield-Caldwell, 2005). Nonetheless, broad dissemination activities can be challenging for academic partners, who may have to go beyond their usual bounds of

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scientific journals and audiences (Chávez, Duran, Baker, Avila, & Wallerstein, 2003; Flaskerud & Anderson, 1999). Dissemination can also be challenging for community members, who may have little time or training, or both, to develop guidelines for, plan, and conduct dissemination activities.

Finally, the translation and application of research findings for intervention development and policy formation is a crucial link to CBPR's commitment to action. As noted by Themba and Minkler (2003), one of the critical differences between CBPR and other research approaches is CBPR's commitment to action and to fostering social changes as an integral part of the research process.

In Part Six, Chapters Thirteen through Seventeen collectively illustrate the four elements of data feedback, interpretation, dissemination, and application of research findings. They show how various data collection methods used within CBPR relate to these four elements. The data collection methods used include group interview and dialogue, photovoice, document review, survey questionnaire, focus group interview and secondary data analysis. These chapters also describe process methods that were used to ensure active participation of all partners in the activities of this phase.

In Chapter Thirteen, Parker, Robins, Israel, Brakefield-Caldwell, Edgren, and Wilkins describe the development and application of guidelines for the dissemination of results from the Community Action Against Asthma project in Detroit, Michigan. The authors offer valuable detail on how and why the partnership members decided they needed guidelines for dissemination and created a structure to develop both the guidelines and procedures for disseminating results. The guidelines provide a useful template for other partnerships to consider and adopt. The authors present concrete examples of procedures and mechanisms to feed back specific components of the research findings to project participants, build in structured time for participants to interpret these findings, and share the results more broadly with community members. The authors also highlight both the successes and challenges of implementing the dissemination guidelines, and the lessons learned throughout the process.

In Chapter Fourteen, Baker and Motton focus on their use of in-depth group interviews in the Planning Grant project and describe the stages involved in collecting data and then using these data to develop action within a CBPR effort. They present a case example of the Planning Grant partnership project in rural southeast Missouri, which conducted a series of group interviews with the Bootheel Heart Health Coalitions over an eleven month period. The authors highlight the following steps in conducting in-depth group interviews: the role of community and academic partners in developing the interview guide, participant recruitment, data collection and analysis, feedback on findings, interpretation of findings, and planning action based on the findings. Their description of the processes used to feed the findings back to participants and seek their interpretation is particularly insightful and will be most helpful to

other CBPR partnerships. In addition, the authors describe how the partnership applied the findings, as the basis of an action planning process, to prioritize community issues for which to develop and implement change strategies. The authors provide a compelling description of the challenges and lessons learned in undertaking in-depth group interviews in the context of the CBPR Planning Grant project.

In Chapter Fifteen, López, Eng, Robinson, and Wang describe the use of photovoice as the principal data collection method for a CBPR project with African American women breast cancer survivors in rural eastern North Carolina. Photovoice is a participatory method in which community members use cameras to take photos that represent and communicate to others their experiences (Wang & Burris, 1994). The authors present a brief overview of photovoice, including the origins and previous applications of this method. Their case example is the Inspirational Images project, an academic-community partnership formed to enable breast cancer survivors to explore and voice their survivorship concerns so that appropriate interventions could be developed to address them. The authors' description of how they conducted photovoice and disseminated their findings, using a CBPR process, offers unique insights into combining research with empowerment education methods. They provide practical detail on planning and conducting a forum to disseminate photovoice findings to "influential advocates" (such as local policy and decision makers) and engage them in a discussion of initiating the next action steps. Their examination of challenges and lessons learned is also most instructive. For example, their discussion of when and how to invite influential advocates to the forum and considerations of the drawbacks of the option they took will assist other partnerships in addressing this issue.

In Chapter Sixteen, Freudenberg, Rogers, Ritas, and Nerney describe their work in participatory policy research (PPR), which is a CBPR approach to analyzing the impact of policies on public health and applying the findings to catalyze action to change harmful policies. As the case example the authors present the Community Reintegration Network (CRN), which advocates for citywide changes in policies related to community reintegration of individuals returning from a municipal jail system to urban, low-income communities in New York City. The authors provide a thoughtful description of some of the key aspects of PPR, such as its emphasis on involving all stakeholders, especially those traditionally excluded from the policy process; beginning with community perceptions of the problem, and thus framing the policy questions broadly and across various sectors and levels of government; and embracing both analysis and action rather than stopping once analysis is completed. Their detailed description of how the CRN partnership applied the following PPR methods to affect policy is particularly valuable: reviews of relevant professional, mass media, government, and advocacy literatures; interviews with government

policymakers, administrators, and advocates; and surveys of various constituencies. The authors conclude with a frank discussion of the limitations and challenges of using PPR, the lessons learned, and the implications for the use of PPR by others.

In Chapter Seventeen, the final chapter, Morello-Frosch, Pastor, Sadd, Porras, and Prichard focus on using the method of secondary data analysis to identify and change policies that adversely affect communities. Their case example is the Southern California Environmental Justice Collaborative, a community-academic partnership that combines (1) research on regional economic development and environmental health, public policy advocacy, and community organizing and (2) research using secondary data sources to document and address Southern California's demographic and geographical distributions of pollution. The authors offer valuable detail on activities to disseminate findings, providing examples of successful efforts to link research with community organizing and advocacy activities to promote policy change. They conclude with insights on the challenges and limitations of using secondary data analysis in a CBPR project and the lessons learned by the collaborative.

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Developing and Implementing Guidelines for Dissemination

The Experience of the Community Action Against Asthma Project

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Ensuring that findings are disseminated to the communities studied is an important aspect of all public health research endeavors. This is especially true in community-based participatory research (CBPR), because a fundamental tenet of CBPR is to use the knowledge generated to inform action with the community involved in the research (Green et al., 1995; Israel, Schulz, Parker, & Becker, 1998). For this to happen the research design and methods must include a plan for translating and disseminating findings so that these findings can inform and be incorporated into community efforts for change at the individual, organizational, community, and policy levels (deKoning & Martin,

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Acknowledgments: The Michigan Center for the Environment and Children's Health (MCECH) is a community-based participatory research initiative investigating the influence of environmental factors on childhood asthma, and is a project of the Detroit Community-Academic Urban Research Center (www.sph.umich.edu/urc). MCECH involves collaboration among the Detroit Department of Health and Wellness Promotion, the University of Michigan Schools of Public Health and Medicine, the Henry Ford Health System, the Michigan Department of Agriculture Office of Pesticides and Plant Management, and the following community-based organizations: Community Health and Social Services Center, Friends of Parkside, Warren-Conner Development Coalition, Kettering/Butzel Health Initiative, Butzel Family Center, Latino Family Services, United Community Housing Coalition, Detroiters Working for Environmental Justice, and Detroit Hispanic Development Corporation. We thank these partners for their contributions. MCECH is funded by the National Institute of Environmental Health Sciences (grants P01-ES09589, R01 ES10688) and the U.S. Environmental Protection Agency (grant R826710-01).

1996; Farquhar & Wing, 2003; Green et al., 1995; Israel et al., 1998). Despite the potential usefulness of creating a dissemination plan, there are few examples in the literature of how to engage all partners in determining the structure and products of the dissemination process. In this chapter, we discuss the experience of the Community Action Against Asthma project of the Michigan Center for the Environment and Children's Health (MCECH) in involving community and academic partners in establishing and then implementing a process aimed at disseminating findings in a timely and understandable fashion to participants, community members, health practitioners, government officials, academics, and policymakers.

OVERVIEW OF THE MCECH AND COMMUNITY ACTION AGAINST ASTHMA PROJECT

The Michigan Center for the Environment and Children's Health is affiliated with an already existing community-academic partnership, the Detroit Community-Academic Urban Research Center (URC) (see Chapter Twelve for a more detailed description of the URC). The URC had identified childhood illnesses related to the environment as a priority area for research. In 1998, the URC board successfully competed for funding from the Children's Environmental Health Research Initiative, awarded by the National Institute of Environmental Health Sciences (NIEHS) and the U.S. Environmental Protection Agency. This five-year award enabled the Detroit URC to establish MCECH as a coordinating structure for the following three studies of childhood asthma:

1. A laboratory-based, mouse model study to determine if the mechanism of chronic pulmonary inflammation due to children's repeated exposure to allergens is mediated by excessive local production of chemokines (the *chemokines* project)
2. An intervention study to reduce environmental triggers for childhood asthma at the household and neighborhood levels
3. An epidemiological study of the relationship between ambient and indoor air quality exposures (for example, ozone and particulate matter) and children's lung function and other asthma-related health indicators

The epidemiological and intervention studies were conducted with the same participant population and guided by the same steering committee (described later) and therefore were combined into one larger project, named Community Action Against Asthma (CAAA). In year two, realizing that there were insufficient funds to implement the neighborhood component of the CAAA intervention due

to an initial cut in the MCECH budget, the CAAA Steering Committee applied for and received an additional grant from NIEHS. This project, which was incorporated into the CAAA activities and was thus administered by the steering committee, focused on neighborhood organizing and policy change aimed at reducing triggers for childhood asthma. Many of the community organizing activities of this project involved disseminating results of CAAA's household intervention and epidemiological studies.

The initial funding period for the three MCECH studies (the mouse model project, the household intervention, and the epidemiological study) ended in October 2004. CAAA's neighborhood- and policy-level intervention study is funded through June 2005 and will enable CAAA to continue its dissemination work.

Because the chemokines project was laboratory based, community members were not as involved in it as they were in the other projects. In addition, the steering committee recognized that the results of the chemokines project would not be as interesting to community members as other project results would because this project was not as immediately relevant to community members' lives as the other studies were. Consequently, although the chemokines project fell under the MCECH dissemination guidelines being discussed here, it did not focus its dissemination activities in the community. Thus this chapter will examine the process and structure for interpreting and disseminating CAAA's household intervention and epidemiological research projects.

CAAA followed the set of CBPR principles originally adopted by the URC to guide the research (Israel et al., 1998). The work of CAAA was guided by a steering committee (SC) that included representatives from community-based organizations, health services institutions, and academia (see the note at the beginning of the chapter for a list of the partner organizations). The CAAA SC met monthly and was actively involved in all major phases of the research and intervention, for example, defining the research questions, designing survey instruments; hiring key staff, and designing research and intervention activities such as educational materials and incentives for participants (Edgren et al., in press; Parker et al., 2003). To ensure that CAAA project results were disseminated according to the CBPR principles, the SC established a dissemination committee to develop guidelines and operating procedures for project dissemination.

CAAA was conducted in eastside and southwest Detroit. Eastside Detroit is predominantly African American (more than 90 percent), and the southwest is the part of the city where the largest percentage of Latinos resides (approximately 40 percent Latino, 50 percent African American, and 10 percent white) (U.S. Census Bureau, 1990). The specific aim of the household intervention project was to reduce residents' exposure to the triggers of

childhood asthma. The household component consisted of a minimum of nine visits over a one-year period by a *community environmental specialist* or outreach worker, who provided education and materials needed for reduction of exposure to asthma triggers, and referrals for medical care, tenant issues, and smoking cessation. The neighborhood component, as described previously, was funded after MCECH began under a separate grant mechanism and involves community organizers working with community residents and organizations to reduce neighborhood- and community-level physical and psychosocial stressors associated with childhood asthma. The neighborhood component is still ongoing.

The epidemiological study analyzed the relationship between ambient and indoor air quality and children's asthma-related health status. The study included the collection of data on asthma symptoms, lung function, medication use, and health care utilization, together with exposure measures such as ambient PM 10 and PM 2.5 (particulate matter with aerodynamic diameters of <10 microns and 2.5 microns, respectively) and ozone.

FORMATION AND FUNCTIONS OF THE CAAA DISSEMINATION COMMITTEE

During the first year of the CAAA project, steering committee members identified three issues of dissemination. First, they wanted to ensure that dissemination reached both academic and community audiences and in a timely fashion. Second, the SC wanted to build and guide the capacity of all CAAA partners, including but not limited to the academic partners, to communicate results, through a range of channels, as soon as the results became available. Especially in view of the potentially significant policy ramifications of project results, the SC agreed that project findings presented by different partners in different venues needed to be highly consistent. The SC was concerned that without a standardized summary of the findings, information might be presented differently by various SC partners and these differences might be used to discredit the findings. Finally, the SC wanted to ensure that both academic and community representatives would always copresent at conferences and coauthor publications on CAAA methods and findings.

Hence, in the fall of 1999, the SC decided to form the dissemination committee (DC) to develop guidelines for dissemination activities and oversee decisions around dissemination. The SC asked one of the academic principal investigators to serve as chair of the DC and to work with other academic

investigators to write the first draft of a set of dissemination guidelines for review and input by the full SC. This draft outlined the potential role of the dissemination committee (for example, outlining core articles, reviewing and approving requests for use of data and access to data, and determining and prioritizing methods of dissemination of findings), suggested criteria for determining coauthorship on academic manuscripts, and proposed that committee membership be composed of five academic and two community partners (representing the different cores and projects of MCECH).

Upon reviewing this draft the SC's community members noted that community representation on the DC needed to be equal to that of academic representation. Thus representation on the DC was set at six academic partners and six community partners.

Recruiting and Selecting Members

The selection processes for the academic and the community members of the dissemination committee differed slightly. After discussion the academic members of the SC decided to ask the leaders of the various MCECH components to be representatives to the dissemination committee. These leaders included the MCECH principal investigator; the intervention, epidemiological, and chemokines project leaders; and the leaders of MCECH's Biostatistics and Exposure Assessment Facilities Cores. This decision was made because these persons would be knowledgeable about the types of data results that would be generated from their projects and also because of a desire to protect the time of those faculty who were more junior in their careers. For the DC community member positions, volunteers from the SC were solicited, with an emphasis on ensuring that there were an equal number of members from both eastside and southwest organizations. Community members who volunteered became members of the DC. Once membership was decided the committee met monthly from January through June 2000. As will be described later, the activities of the DC were assumed by the SC in July 2000.

The dissemination committee decided to hold its meetings before or after steering committee meetings, to make them more convenient for members since all members of the DC were also members of the SC. Dissemination decisions were made through a consensus process used previously by the URC (Israel et al., 2001). Members were asked if they could agree to a proposed decision by at least 70 percent (as opposed to 100 percent). Using this rule, proposed decisions were discussed and modified, if necessary, until all DC members could support the decision by at least 70 percent. The proposed decisions were then added to the next steering committee meeting agenda for discussion and final approval.

Further Developing Dissemination Guidelines and Related Issues

During DC meetings, members discussed and revised the draft dissemination guidelines and related issues and agreed on recommendations to make to the SC, as discussed later, for decisions about

- Developing a process for selection of SC members to participate in conference and meeting presentations
- Further revising and finalizing the dissemination guidelines
- Establishing ground rules for coauthorship
- Drafting a proposed list of core articles and presentations to be developed from the project

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Selecting Partners to Copresent at Conferences. At the first meeting of the DC, members discussed the procedure for selecting CAAA partners to copresent at conferences at length. Committee members recognized the importance of presentations at national and local venues as a vehicle not only for disseminating research results but also for emphasizing the CBPR partnership between MCECH researchers and community members. DC members' discussion of including, whenever possible, a community copresenter with an academic copresenter addressed the following issues and suggestions:

- The CAAA dissemination policy should articulate procedures that would avoid resentment among SC members and staff who might like to copresent but were not chosen to do so.
- The selection criteria for copresenters should include level of participation in the project and attendance at the monthly SC meetings, ability to present a quality and informed presentation, and comfort in presenting in a public venue. The committee acknowledged that not all persons participating in CAAA would have public-speaking skills and experience and therefore the DC discussed the possibility of offering training in public speaking.
- Requests to copresent at a conference should be brought to the steering committee meeting for approval. If this were not possible, owing, for example, to time constraints imposed by due dates for abstracts, the person requesting permission to present at the conference would contact all SC members via phone, e-mail, or fax for approval.
- Because CAAA's academic partners often received information about conferences that the community partners did not receive, they had an extra responsibility to notify community partners in a timely fashion to allow adequate opportunities for the DC to follow dissemination policy.

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- Two guiding principles for CAAA's dissemination process have been to ensure that all presentations are made with the knowledge and approval of the SC and that the authority of community partners is equal to that of academic partners in deciding who speaks for the whole group.

To ensure equitable copresentation at conferences, one academic partner suggested the adoption of the Rose Bowl Principle. This refers to the policy followed by the Big Ten athletic conference (which includes the University of Michigan) for determining which team will participate in the Rose Bowl football game when two teams have identical records. The policy states that the team that has participated less recently in the Rose Bowl will be selected. Hence, the SC should select copresenters who either have not presented before or have not presented as recently as other potential presenters.

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Further Revising and Finalizing Dissemination Guidelines. The DC took approximately three months to develop and further revise the dissemination guidelines, carrying out such tasks as adding a section on procedures for selecting participants to present at conferences, as just described. An ad hoc committee of the DC was formed for the purpose of further revising the guidelines. Members of this ad hoc committee drafted a statement of rationale and operating philosophy, and after approval by the SC, this statement was merged with the already existing description of dissemination procedures. This final document was adopted by the SC and titled the "Philosophy and Guiding Principles for Dissemination of Findings of the Michigan Center for the Environment and Children's Health (MCECH) including Authorship of Publications and Presentations, Policies and Procedures, Access to Data, and Related Matters" (see Appendix I).

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Establishing Ground Rules for Coauthorship. The DC wanted to follow standard guidelines for authorship, such as those of the International Committee of Medical Journal Editors, which states that all authors must have made substantial contributions to each of three activities (in either oral or written form): (1) conception and design, or analysis and interpretation; (2) drafting the article or revising it critically for important intellectual content; and (3) review and approval of the final version to be published (International Committee of Medical Journal Editors, 2004). The DC also wanted to make explicit what was meant by a "substantial contribution" in a way that ensured recognition of community as well as academic partners as authors. The definition agreed to was active participation in the conception and design or analysis and interpretation, measured directly by number of hours of input on collecting, processing, and interpreting data; indirectly by time and energy spent supervising a junior researcher in the acquisition,

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processing, and interpretation of data; or both. Though not stated in the guidelines (perhaps because it was recognized from the start as an implicit requirement of all dissemination activities), all manuscripts must include both community and academic partners as coauthors. As described later, the DC then developed a process for proposing manuscripts for publication and presentations, determining their priority, and identifying the lead and coauthors for each.

Drafting a Proposed List of Core Publications and Presentations to Be Developed from the Project.

The DC asked its academic members to draft a proposed list of core articles for publications and presentations on findings from the CAAA project. Core articles were defined as those central to the main hypotheses described in the initial proposal. The SC agreed that once those core articles were determined by the DC, other members of the broader CAAA team could propose additional topics for publication and presentation. Over the course of four months, the academic members drafted a list that went beyond the initially proposed core articles and included thirty-five possible topics in seven broad areas (such as methodology, exposure assessment, and intervention-related). Later, when the teams began writing, they realized that many of these topics were not sufficient for stand-alone articles and they combined topics into a smaller number of manuscripts.

The DC approved the list and expected that the lead author for articles that were data driven would come from the academic members of the research team, because they would be the best versed in the details of study design and analysis. The DC also suggested adding articles on findings that were not data driven, such as lessons learned about different participant incentive options, noting that the lead author for these articles would come from the community members of the research team. The DC acknowledged that even in the CBPR literature, community partners rarely served as the lead author, perhaps, as noted by a community member of the DC, because community partners tend to be “the doers, not the writers.” Hence, CAAA’s contribution to furthering the influence of CBPR could be to build the capacity of community partners to take the lead in disseminating findings to an academic audience. A category of articles entitled “other qualitative methodological,” with seven possible topics, was added to the list to cover these possible manuscripts. As will be discussed later, to date there have been no articles in which the lead author was a community partner. The DC prioritized the overall list of possible articles and identified seven manuscripts that should be completed first. These manuscripts were mostly descriptive and were chosen because they did not require data results (which were not yet available) and they would describe the various aspects of the project so that future manuscripts

would not have to include such details on the project methodology and could instead refer to these earlier articles.

Establishing Procedures for Feedback to the Community

The DC also discussed and established initial procedures for dissemination of information to the community. For example, the DC established a process for handling requests from the media in which any inquiries from the media would be directed to the project manager, who would determine which academic and community members it would be best to involve, depending on their expertise and availability. The DC also decided to have a fact sheet about the project and key findings, which would be updated quarterly, as well as a newsletter to disseminate information and to serve as a retention tool for participants (as described later). Processes for some community-wide dissemination activities (such as community forums and meetings with policymakers) were not specified by the DC but were later handled by the SC and will be described in the next section.

TRANSITION OF DC RESPONSIBILITIES TO THE SC

After six months, questions arose during a dissemination committee meeting about whether there was a continuing need for a separate dissemination committee or whether its ongoing functions should be part of the steering committee's responsibilities. Attendance at DC meetings was becoming a problem; sometimes not enough members were present to establish a quorum. Consequently, DC members decided that after dissemination procedures were in place, they would meet less frequently and much of the DC business would be carried out by fax, e-mail, and mail.

With the SC's adoption of the "Philosophy and Guiding Principles for Dissemination," the DC ceased to meet. Although there was never an explicit discussion and decision about disbanding the DC, the SC began handling dissemination issues at its monthly meetings. This occurred due to a combination of the following factors:

- Dissemination processes and procedures were in place, so the SC had a roadmap to use in making dissemination-related decisions
- All but two members of the steering committee were also members of the dissemination committee, so the DC was well represented on the SC
- The time required placed an excessive burden on community members who served on both the DC and SC
- A leadership transition had occurred when the DC chairperson left for a sabbatical and was replaced by another academic member

IMPLEMENTATION OF THE GUIDELINES: EXAMPLES OF DISSEMINATION DECISIONS AND ACTIVITIES

The dissemination activities of CAAA were varied and included presentations and materials focused on academic audiences, the steering committee itself, the broader community, and the participants in the CAAA research projects. Table 13.1 lists the types of dissemination activities carried out by CAAA during the course of the project. The following section describes how the dissemination and steering committees implemented the guidelines in the various dissemination-related activities.

Selecting Representatives for Conferences and Meetings

For the most part the selection of presenters for conferences and meetings followed criteria and procedures as discussed earlier and outlined in the

Table 13.1. Types and Numbers of CAAA Dissemination Activities over Five Years

<i>Type of Dissemination</i>	<i>Number Completed</i>
National conferences, invited presentations	58
State or local conferences, invited presentations	7
Community forum(s)	3
Academic manuscripts	10
Newspaper, Web-based, magazine, radio, or TV interviews	15
Briefings or presentations for elected officials or government employees	3
Newsletters	12
Fact sheets (findings, project description)	6
Web-site development	1
University classroom presentations	10
Presentations to community groups	
• Schools	20
• Community-based organizations	4
Feedback to project participants	
• Lung function (all participants)	280 participants
• Indoor air sampling results (subsample of participants)	15 participants
• Feedback forums	1 for eastside, 1 for southwest

dissemination guidelines (see Appendix I). The selection of academic representatives was often the most clear-cut process, depending as it did on the nature of the meeting and the subject to be presented (for example, results of the intervention, results of the epidemiological study, air quality monitoring). Whenever possible, academic members of the research team who were more junior in experience were selected, to help them gain further experience and recognition.

The DC had worried about potential disagreements over which community representative would make certain presentations, but this did not occur. For example, during the third meeting of the DC, one of the academic researchers notified the members that a community member was needed to copresent with an academic at a national conference on CBPR, sponsored by the National Institute of Environmental Health Sciences. After discussion of the focus of the conference and the presentation that had been requested, one community partner nominated another community partner to present, based on her involvement and knowledge of CAAA and the relevance of her previous work to the presentation. The rest of the committee supported this nomination and the “nominee” agreed to copresent.

In general, selection of attendees for conferences became a more informal process than originally proposed by the DC. For example, for each conference presentation or meeting invitation, the dissemination guidelines spelled out that the SC would develop a list of the people who were eligible, based on their level of participation, their knowledge and experience, and the SC’s desire to ensure that a variety of members were offered this opportunity. In actuality, academic members who were either submitting conference abstracts or had been invited to present, would ask for volunteers or would suggest a person (based on the presentation topic) and request SC approval.

Approving Abstracts and Abstract Authorship for Conference Presentations

The DC also discussed the need for a process for submitting abstracts for SC approval before they were officially submitted for review by conference organizers. Noting that abstracts were sometimes “last-minute” submissions, the DC discussed ways to ensure that the abstracts would be reviewed by the SC without jeopardizing their timely submission. The DC suggested that SC members create a list of the conferences and meetings (and their abstract submission deadlines) that the SC would like partners to attend, so that to the extent possible, last-minute approvals and submissions could be avoided. However, this list was never formally developed.

The DC also adopted and implemented the following procedure for abstract submission. The interested person (if other than the lead researcher) first submitted the abstract to the lead researcher of the project that was the subject of the abstract, for his or her approval. The lead researcher would then send

the abstract to the steering committee members. If time permitted, this process happened before an SC meeting so that the abstract could be discussed at the meeting. If this were not possible, SC members were asked to respond by telephone or e-mail to say whether they had any questions or concerns with the abstract and whether or not they approved the abstract. This approval process was one of passive consent, that is, if steering committee members did not respond about the abstract, it was assumed that they approved its content and coauthorship.

Selecting Lead Authors and Coauthors for Manuscripts

As noted earlier, the dissemination committee drafted and prioritized a list of core articles for publications and presentations. The steering committee selected lead authors for core articles, from the principal investigators or coinvestigators of the project. Writing teams were then determined, based on the topic and the involvement of SC members in that particular aspect of the project. Once the SC named a writing team, the lead author brought the writing team together either in person or by telephone conference call, at which time he or she either presented a draft outline for discussion by the group or spent this time working with the group to create an outline. The lead author was responsible for writing the first draft, basing it on this outline and discussion and consulting with the coauthors as needed. This first draft was then shared with the coauthors for their review and feedback, and the lead author made revisions in light of the coauthors' comments, repeating this process until the article was ready to be submitted. The early stages of this process usually involved several meetings of the writing team, with the subsequent review and revisions handled via e-mail and regular mail and telephone conversations.

Handling Requests for Use of Data

The DC also developed a procedure for requesting permission to use data from the CAAA project. As part of this procedure, anyone interested in using the data for a purpose other than writing a core article had to complete the "Request for Use of Community Action Against Asthma Data" form. The form required the applicant to answer the following questions.

1. Are you requesting this data for personal or for organizational use? Please explain.
2. Please describe in detail what data you are requesting from CAAA, both with respect to scope and desired format.
3. Please describe in detail for what purposes you wish to obtain this data and how the data will be used. Include in your description how this use of the data will benefit the Detroit community, as appropriate to the intended purpose, and how this use otherwise will follow community-based participatory research principles [a copy of these principles was attached to the form].

If necessary, the requester was asked to come to a SC meeting to further explain the request and answer questions. In addition, all requesters who were allowed to use data were required to come to an SC meeting to present the findings of any analysis performed with CAAA data. To date, three doctoral degree students and one master's degree student have requested and used CAAA data for their theses.

Discussing a New, Affiliated Project and the Way to Handle Dissemination Requirements

Within six months of the DC's formation, an investigator from another university approached the Community Action Against Asthma Steering Committee about collaborating on an additional exposure assessment project. This new project, which was to take place during one of CAAA's seasonal assessments, would require parking a mobile laboratory (contained in a specially modified tractor-trailer) beside one of the primary schools where CAAA was conducting ongoing air quality monitoring using equipment placed on the school roof. The investigator wished to use CAAA data to augment data collected by the mobile laboratory (which would conduct animal experiments assessing the effects of exposures to concentrated pollutants in the air on the animals' lung function). The DC was concerned about how data from the two projects would be shared and wanted to ensure that all results from this new project would be shared with community members in a way that complied with CAAA's dissemination guidelines. The DC recognized that the investigator of the proposed new project did not use a CBPR approach, but felt that he might be open to learning more about and following the principles of CBPR, especially in this project. After much discussion the DC suggested that CAAA draft a letter of agreement that stipulated the requirements for dissemination, and the SC agreed with this suggestion. The letter of agreement included the following requirements: any manuscripts that originated from this new project must include coauthors from CAAA, the CAAA data manager and biostatistician must be informed of any additional analysis undertaken by others, and CAAA must be kept abreast about the work and progress of this new project (through such means as formal presentations of results to the CAAA steering committee). The CBPR principles and the dissemination policies and procedures were attached to the letter of agreement. The new investigator agreed to the requests in the letter of agreement and subsequently presented project results to the SC on several occasions.

Feeding Back to Participants and the Wider Community

Throughout the project both the dissemination committee and later the steering committee were active in developing and implementing mechanisms for

feedback to study participants and the larger community. Methods of feedback included fact sheets about the project and general project findings, individualized feedback sheets for project participants (including, in some cases, individualized meetings to explain the results), and a series of forums for project participants and the broader community.

Fact Sheet Development and Distribution. One of the initial decisions of the DC was to create a *fact sheet* about the project. The DC proposed that the fact sheet be developed in layperson's language, updated quarterly, and distributed within the community. The DC felt these fact sheets could serve as the main source of information for informal presentations by SC members and staff in the Detroit community and could also be distributed directly to interested community members, legislators, and government officials. The intent of the fact sheets was to give an overview of the CAAA intervention and exposure assessment projects, share data findings as they emerged, and also include relevant findings from other research projects on similar topics. The DC and later the SC were instrumental in the development of these fact sheets. They provided input on focus and content and ensured that the sheets were understandable and culturally and linguistically appropriate for the intended audiences. (See Appendix J for an example of a fact sheet on particulate matter.)

Individualized Feedback to Project Participants. As part of the exposure and health effects component of the project, lung function assessments were performed twice daily over two weeks in each season, with a handheld, digitized peak flow device. The two academic physician members of the SC worked closely with SC community partners to develop a clear and useful format for sharing this inherently complex data with project participants. The results were also mailed to all physicians of the participating children if the caregivers had requested CAAA to do so.

Individualized feedback on indoor air quality was also presented to the fifteen families who participated in the intensive air sampling component of the exposure and health effects study. The academic partners involved in this component worked with project staff to develop individualized feedback sheets. These sheets showed the levels of particulate matter (PM) 2.5 and ozone in each individual home compared to the aggregate levels of all fifteen homes and to the overall EPA National Ambient Air Quality Standards for outdoor levels of PM 2.5 and ozone. These sheets were shared with the families during a meeting in which the academic partners gave an overview presentation of what they had found, explained the results, and then were available to meet with the families to answer their questions. (See Appendix K for an example of a feedback sheet on air quality provided to a participant in the intensive air sampling component.)

Community Forums. In the fourth year of the project, as preliminary results became available, the steering committee conducted a series of forums to feed back the results to the broader community and the project participants. A subgroup of the SC, consisting of project field staff, two academic partners, and two community partners, developed a proposed plan for the forum and shared it with the SC for input and modification. Initially, the SC planned to have a single forum for both project participants and other interested community groups, but on further discussion the SC chose to hold separate forums. Some of the academic partners suggested that the results should first be presented to the participating families for their information and reactions before being presented to the wider community. Following this suggestion, the SC decided to have two separate forums for participants (one in eastside and one in southwest Detroit) before staging a community forum for the wider community. The SC also felt that having two separate forums would make it easier for participants from these separate intervention areas to attend a forum. These two forums were held on successive Saturdays and lasted two hours each.

The format of the family forums consisted of a welcome by project staff, presentation of intervention and air quality research results by the academic partners, questions and discussion, and a small-group exercise in which the family participants were asked to respond to a set of questions developed by the planning committee and aimed at increasing understanding of the findings. CAAA served refreshments, distributed door prizes, and provided transportation and child care to ensure that participants could attend. The southwest and eastside family forums were attended by twenty-five adults and nineteen adults, respectively. Forum participants included adult caregivers from CAAA participant families and guests of the immediate families (friends and additional family), numerous children who either went to the child-care room or participated in forum activities, and several CAAA staff, researchers, and steering committee members. The community-wide forum was held a few weeks after these two initial family forums and focused more on the results of the air quality and health effects investigations. This emphasis was proposed by the planning committee and approved by the SC, both of whom felt that community members would be more interested in this aspect of the study than in the results of the intervention. Members of community-based organizations, governmental agencies and officials, families who had participated in the study, and individual community residents who had attended previous CAAA events or had worked for CAAA in data collection activities were invited to attend the community-wide forum. This larger forum was attended by forty-one individuals, including CAAA family participants, staff members of locally elected officials (a state representative and a county commissioner), agency representatives, advocacy workers, and community members. Many of these individuals and groups were identified through an assessment performed by the staff of the community

organizing component of CAAA with the active involvement of the SC. (For more information on these forums, see López et al., 2005.)

CHALLENGES

The steering committee experienced a number of challenges in creating and implementing guidelines for disseminating research findings in a community-based participatory fashion. We describe these challenges in this section, and in the next section we present the lessons learned about handling these challenges, as well as the implications of these lessons.

Adhering consistently to the dissemination guidelines. One of the challenges CAAA faced involved situations in which academic members of CAAA were invited to speak about the project at national meetings or conferences. When this occurred, the invited person would let the conference organizers know that due to the participatory process of the CAAA partnership, presentations were normally copresented by an academic and a community partner. Often the organization or conference planner would agree to pay for two persons to copresent, but sometimes the organization did not have enough funds to sponsor more than the academic person originally invited. If project funds were not available to pay for the community partner's expenses, the situation was discussed openly at SC meetings. In general, community partners understood the constraints and the academic partner would present alone.

Another challenge involved meeting deadlines for submitting abstracts and responding to invitations to present at conferences when these occurred in between the monthly meetings of the DC (and subsequently the SC). A combination of e-mail, phone, and fax messages was used to communicate between the abstract submitter or the invitee and the rest of the SC. Though not as ideal as a face-to-face discussion at a SC meeting, this system seemed to work fairly well.

A third challenge in adhering to the dissemination guidelines was that of balancing dissemination activities with other project demands. All research projects, including more traditional projects, face this tension between ongoing project implementation and data collection and dissemination activities. Yet the additional dissemination-related activities needed in a CBPR approach can increase the difficulty of achieving a balance between ongoing implementation and dissemination of findings. During the CAAA project, not all the activities outlined in the dissemination guidelines happened as originally planned. For example, although the original intention of the DC was to have all fact sheets updated quarterly, SC members' and project staff's occupation with project implementation activities left little time for further data analysis or even recognition that updating of the fact sheets had fallen behind schedule. Another example is that feedback to the participants about their lung function results

happened much later than was originally intended. Much of this delay was due to the ongoing project implementation duties of the members of the research team. The community partners and field staff were understandably frustrated by the delay in presenting these results to participants, and the academic members were frustrated at the lack of resources to make this happen sooner.

Ensuring up-to-date involvement of community partners in the data analysis process. CAAA also faced challenges related to involving community partners in data analysis and informing them of the data analysis steps. As occurs with most research projects, data preparation and analysis was conducted at the partner university and was ongoing from the second through the sixth year of the project. Community partners involved in writing articles and papers usually viewed the data in table form, after preliminary data analyses had been conducted. Given the large amount of data collected, data cleaning and analysis took what seemed to community partners to be a very long time. Although the academic members of the SC gave semiannual reports about preliminary findings, community members of the SC were rarely kept up to date about the progress of data cleaning and analysis. In addition, it became clear toward the end of the project that community members had not been well informed about the complexity of data cleaning and analysis and the time it typically took. This resulted in frustration about the delay in feeding back results to the community and in completing and submitting manuscripts about project results.

Achieving a balance between dissemination and feedback to community and academic audiences. CAAA also faced the challenge of achieving a balance between the dissemination and feedback to the community through such means as fact sheets and forums and the dissemination to academic audiences through such means as journal articles. Israel and colleagues (1998) have identified the considerable time it takes to develop and maintain relationships and to involve all partners in the research process as a challenge for academics participating in CBPR. Although some aspects of preparing for dissemination of results to community members (for example, data analysis and the preparation of visual displays) can also be useful in manuscript development, the time spent disseminating results to community members can be time that is taken away from writing manuscripts. In the fifth year of this project, concerns related to productivity (defined by the funder as manuscript submission and publication) were discussed. SC members considered ways to ensure that academics had the time needed to produce manuscripts while also ensuring that dissemination to the community continued. They discussed having community members of the SC take the lead on presenting at community venues. This strategy had been discussed by the DC (and was the impetus for the development of the fact sheets), but such presentations did not occur. SC members determined that community members serving on the SC would need to receive training on data interpretation and presentation and would need to

have additional resources (such as stipends) because these activities would be over and beyond their everyday duties. CAAA intends to pursue this approach in the future.

Ensuring that dissemination is culturally sensitive and competent. Another challenge faced by CAAA was that of ensuring that dissemination took place in a culturally sensitive and competent manner. Given that CAAA worked with two different geographical communities and with white, African American, and Latino participants, issues of culture were important in designing community feedback activities. All project materials, including fact sheets about project results, were produced in English and Spanish. In addition, at the forum in southwest Detroit (which is the area with the largest percentage of Latinos in Detroit) and at the community-wide forum, a Spanish interpreter was present to provide simultaneous interpretation. CAAA also hired an interpreter for the one deaf project participant. To ensure that project materials were appropriate to the African American and Latino cultures with which CAAA was working, SC members and project staff of these ethnicities reviewed all dissemination materials (including presentations at the forum) and offered suggestions to improve them.

Involving partners with differing experience and expertise. As the dissemination committee had recognized at the beginning of the project, not all partners had the same level of experience and expertise in preparing manuscripts or presenting at conferences. Seeking to ensure that persons with less experience and expertise were not excluded, the committee suggested processes for capacity building (for example, conducting mock presentations before the scheduled meeting so persons would gain experience and feedback). In addition, academic partners realized that being a coauthor might be a new experience for some of the partners and considered multiple ways of obtaining comments and ideas on each article from all partners. For example, some partners preferred to suggest changes and edits through direct conversation rather than in writing.

LESSONS LEARNED AND IMPLICATIONS FOR PRACTICE

The CAAA experience offers a number of lessons and implications for the field.

The value of and need for joint academic-community participation in all dissemination activities. The SC found that involvement of academic and community members in all dissemination activities greatly enhanced the efforts of the CAAA project. As expected, community partners brought expertise on venues for community dissemination as well as advice on “breaking it down,”

as they referred to the process of helping the academic members deliver research results in language that was understandable to community members. Similarly, academic partners brought their experience in writing presentations and publications for academic audiences. Partners also contributed to each other's traditional area of expertise in dissemination-related activities. For example, community members coauthoring manuscripts and copresenting at conferences raised issues about interpretation of results and offered valuable input on content and writing style, which served to make these presentations and manuscripts much stronger. And as noted before, academic members were the ones to raise concerns about presenting results at a community forum before first presenting the results to project participants.

As described in this chapter, the presence of structures (for example, a steering committee and its subcommittees) and processes (for example, frequent meetings, written dissemination guidelines) that fostered relationship building and trust facilitated the joint participation of academics and community members in dissemination activities. We would suggest that all research partnerships develop initial structures and processes for joint collaborative participation as a first step toward such participation in dissemination of research results. (See Chapters Two and Three in this volume for further discussion of ways to ensure joint collaborative participation.)

The need to recognize that dissemination is time consuming and may not be part of the "job description" of all partners and that projects should address how to compensate partners for their time and contributions and how to acknowledge what they do. Stoecker (2003) notes that in a CBPR project, community members may be asked to "participate in ways they aren't interested in or don't have time for" (p. 102). This may be especially true for some aspects of dissemination, such as involvement in coauthoring manuscripts or copresenting papers at national conferences and meetings, because these tasks are not part of the usual duties of most community partners. For example, as described earlier, despite much discussion and actual identification of potential manuscript topics for community members to take the lead on, to date no community member has served as lead author for a manuscript. Thus resources that would enable community members to involve themselves in this type of dissemination need to be identified and provided.

Stoecker's observation may also apply to academic partners. Traditionally, academics are rewarded for their participation in certain scientific dissemination activities, such as peer-reviewed publications and, to a lesser extent, presentations. Other forms of dissemination, such as community presentations, authoring fact sheets about research findings, and individual presentations to project participants, however, are not recognized and rewarded by most tenure and promotion systems or by funding agencies (such as the National Institutes of Health).

To address these issues, research partnerships need to consider dissemination when they are developing the initial proposal. For example, providing stipends for community members that more accurately reflect their desired involvement in dissemination activities may allow them to participate more intensively. In addition, continued efforts are needed on the national level, first, to educate academic institutions on the importance of dissemination activities in the community as a form of translation of research findings and the importance of recognizing this type of dissemination in the tenure and promotion process and, second, to educate funding agencies about the need to acknowledge these types of dissemination activities in evaluating the “productivity” of CBPR projects.

The need to develop an appropriate mechanism for identifying and deciding on dissemination issues and guidelines. When the SC formed the dissemination committee, it was with the understanding that this committee would continue to function throughout the life of the project. As noted earlier, however, the DC ceased to meet after the guidelines were developed and the steering committee took on the duties of the DC. In retrospect the SC was unrealistic in adding another layer of meetings and responsibilities to the work of SC members.

We recommend a more realistic process that would involve forming a short-term, ad hoc committee to focus on developing dissemination guidelines, with the understanding that once the guidelines were developed the partnership’s governing body would implement them. We further suggest the incorporation of a standing “update” agenda item on dissemination for each meeting of the partnership, even if no dissemination-related events have taken place. This would encourage ongoing discussion on the progress made in data analysis and foster more open discussion and the education of all partners about what is involved in the data preparation and analysis process.

The need to budget adequate resources for dissemination activities. As suggested earlier, resources to compensate community partners for their participation in dissemination-related activities need to be included in grant proposals. In addition, funds for dissemination activities (for materials and refreshments for community forums, translation of materials into appropriate languages, and interpretation services for forums and meetings) should be included in project budgets. Finally, resources are needed to cover the staff time required to pursue dissemination-related activities.

CONCLUSION

Dissemination of research findings in ways that are understandable and helpful to community members is a crucial component of community-based participatory research. In this chapter we have shared our experience in establishing

a process for dissemination of research results using a CBPR approach. Although we have had successes in our dissemination activities, we also acknowledge the challenges we have faced and the need to continually improve upon our efforts. We have been energized by the positive and enthusiastic reaction to our efforts to share the results of our research with the project participants and community members who have made the project possible and to do so in a way that acknowledges the contributions of both community and academic partnership members. This positive reaction has strengthened our belief in the importance of community-academic participation in the dissemination of research findings to the project participants and community members who will most benefit from knowing and applying these results to foster community change.

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Creating Understanding and Action Through Group Dialogue

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In community-based participatory research (CBPR), data collection is seen as an essential part of and integral to taking action (Israel, Schulz, Parker, & Becker, 1998). Focusing on the method of in-depth group interviews, this chapter will examine the stages involved in collecting data and using these data to develop action in a CBPR project. Attending to these stages will enhance the quality, validity, and relevance of the data, and this in turn will contribute to the appropriateness and effectiveness of actions taken (Greenwood & Levin, 1998; Heron, 1996; Mason, 1996; Mishler, 1986).

In order to illuminate these stages, we first review the literature regarding in-depth group interviews and identify the stages in the process. We then present a case study describing a project's experiences in using in-depth group interviews, with emphasis on data feedback, analysis, interpretation, and action. Finally, we discuss some of the challenges, limitations, and lessons learned in using this data collection method in the context of a CBPR effort.

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METHOD OVERVIEW: IN-DEPTH INTERVIEWS

In-depth interviews are often described as following one of three approaches: unstructured conversational interview, interview using a general interview guide, or structured, standardized open-ended interview (see Patton, 2002, for an in-depth discussion). In the unstructured conversational interview there is no predetermined set of questions; instead, the interviewer responds to the conditions at hand and pursues various lines of inquiry accordingly. One particular individual or group may be interviewed on multiple occasions. This method allows the interviewer to respond to the specific context and is most useful when an interviewer will be in the community for an extended period of time. This approach is also helpful in gathering insight into the types of questions or issues to pursue in a second or subsequent interview. However, use of the conversational interview makes it difficult to obtain similar types of information from several different groups or individuals. In contrast, when interviews using a general interview guide are carried out, the interviewer uses a general outline of issues to direct the lines of inquiry to be explored. This approach allows similar issues to be addressed across individuals or groups while maintaining a conversational quality or tone in the interview and allowing unique responses across individuals and groups. Lastly, the standardized open-ended approach employs a carefully worded set of questions, so that each interviewer asks each participant the same questions in exactly the same way, thus providing maximum consistency across interviews. Although these methods are often framed as three different approaches, it is also possible to combine aspects of them: for example, one might use a standardized open-ended approach but maintain the flexibility to ask participants somewhat different questions or to probe for more depth depending on their responses (Patton, 2002).

In-depth interviews may be conducted with individuals or with groups and may occur multiple times with the same or new participants. A project may mix and phase the approaches across time to maximize the types of information gathered (Mason, 1996; Mishler, 1986). The use of group interviews, as discussed here, involving a common core of individuals in an iterative process, may enhance participant cohesion and the likelihood that the group will be able to use the information collected to create interventions (Mason, 1996; Mishler, 1986). For an examination of the use of in-depth interviews with individuals see Chapters Four, Ten, and Twelve.

Projects face several considerations in deciding which of these approaches is most appropriate. For example, the standardized open-ended interview method is useful when there are multiple interviewers; however, it allows the least amount of variability and responsiveness. In addition, this approach is least likely to build rapport among individuals or groups. Alternatively, although the conversational interview approach may be helpful for establishing trust and

rapport within a CBPR approach, it is often useful to combine it with a more structured process so that project partners will have appropriate data for defining directions for action.

In a CBPR approach all partners are involved in all stages of the research (Baker & Brownson, 1998; Greenwood & Levin, 1998; Israel et al., 1998, 2003; Minkler & Wallerstein, 2003; Mishler, 1986), including developing the data collection methods, recruiting, collecting data, analyzing data, conducting feedback and member checking, interpreting data, and moving from analysis to action. The partners involved in a CBPR effort for public health will vary according to the project and may include academicians, health department personnel, health care providers, members of community-based organizations, and individuals who identify themselves as members of a community relevant to the project (Baker & Brownson, 1998; Israel et al., 1998). In some instances the project may create new alliances; in other instances the project may draw on existing relationships among individuals, groups, and organizations; and in yet other instances, some of the project partners will have worked together previously and others will not. (See Chapter Two for a discussion of developing and maintaining CBPR partnerships.)

The roles that each partner takes in the various stages of the research may vary considerably. It is therefore important for partners to agree to the operational details of the processes used for a particular project, including what data will be collected and how they will be collected; who will review the data collection guides; who will collect the data; from whom data will be collected; who will take part in data analysis, feedback, and interpretation; and who will take the accumulated information and move it toward action. These roles should be made explicit for each project, regardless of the previous history partners may have from working together.

Developing Interview Guide and Recruitment Strategies

CBPR paradigms for data collection recognize that the questions asked and the way they are asked influence the information gathered and thus the actions taken as a result. It is therefore important that any interview guides or standardized questions make sense to and are useful for all partners (Israel et al., 1998; Mason, 1996; Minkler & Wallerstein, 2003; Mishler, 1986). In addition, within the context of a CBPR project, the development of the interview guide is an iterative process in which partners are involved in deciding not only what questions to ask but also how to administer the agreed-upon interview guide. As a result, the interview guide may be administered as part of a larger community assessment or program development process.

A related issue is deciding from whom data will be collected and how these respondents will be recruited. It is important to decide on an appropriate sampling strategy ahead of time. Patton (2002) describes several sampling strategies,

ranging from “snowball” to “maximum variation” to “criterion.” The best strategy to use depends on the information the partners agree they want to gather. For example, in snowball sampling, recruitment begins with those who are known to be appropriate given the purpose of the interview, and these initial contacts then recommend others they think would be useful interviewees. In other instances recruitment might involve contacting particular agencies or individuals who hold positions in the community and inviting them to be part of the process. If one is interested in group interviews (the focus of this chapter) that build on, and perhaps help to enhance, existing social networks, one might be best served by involving existing coalitions and community or civic groups. In a CBPR context community partners can provide critical information about the best people and groups to contact. Often it is useful to contact individuals by telephone and follow up with a letter confirming the time and place that the interview will be held. The organization or individual making the contact may influence willingness to participate. It may therefore be helpful to have community partners rather than academic partners make the initial contacts.

Data Collection

A facilitator (or co-facilitator) usually conducts the data collection process, initiating and maintaining discussion throughout the group interview. When using a general interview guide, it is possible to ask broad questions and then probe for more information while allowing the specific ordering of the questions to follow the conversation generated within the group (Patton, 2002). It is essential to document the discussion in a way that allows the content and process to be captured. Documentation may take the form of written field notes, audio-tapes, or a photographic record (videotapes or still photographs), or any combination of these. It is also essential to obtain informed consent from participants for how the data will be shared and with whom they will be shared.

Analysis

The analysis of group interview data is a process of describing the data, not interpreting the reason for the data (Patton, 2002). The initial coding of data can happen in many ways. Most frequently, tape-recorded interviews are transcribed, keeping as close as possible to the exact words used during the interview. The transcriptions are then divided into meaningful data segments and placed into categories of common themes, using deductive focused or open coding techniques (Patton, 2002; Strauss, 1987). The data in these categories are then compared, using a process of constant comparison, to ensure that they have similar meanings within categories and different meanings across categories (Strauss, 1987; Strauss & Corbin, 1990). It is often beneficial to train and use multiple individuals, people representing both academic and community partners, to code the data. It is also important to pay attention to issues of interrater

reliability: that is, the comparability of coding across data analysts (Patton, 2002). Differences in coding may point to problems in the coding scheme. Alternatively, if both academic and community partners have been involved in the coding, coding differences may highlight their different perceptions. Although identifying differences in academic and community perceptions is beneficial, one of the concerns when community partners code raw data is confidentiality. Even when identifiers are removed, community partners can sometimes tell who is speaking by the context and content of the statement. In such instances it is usually best to have community partners work with the data after they have been summarized and coded.

Feedback and Member Checking

Once data have been collected and analyzed, it is important to ensure that the summary of results is accurate and can be used for action planning (Mason, 1996). This requires collecting feedback and conducting what some have called *member checking*, checking with the individuals who took part in the data collection process to make sure that the results of the data analysis reflect the information they supplied (Heron, 1996; Mason, 1996; Seale, 1999). In the context of CBPR it is also important to provide the broader community, not just the participants in the interview process, with the summary information and to engage community members in the feedback process so that data can lead to appropriate action steps (Heron, 1996; Mason, 1996; Seale, 1999).

The best way of summarizing and sharing the results of in-depth group interviews depends on the type(s) of data collected and the participants involved in the process. Data may be shared verbally, in writing, or through pictures or other formats. Regardless of the method, they need to be shared in a way that allows participants to understand, modify, and suggest alternative summaries. The idea is to develop a process through which participants can determine whether the data accurately represent the viewpoints of those who provided them. Feedback and member checking are intended to allow all partners to move toward increased and sometimes new understandings and to ensure the credibility of findings (Guba & Lincoln, 1989; Heron, 1996; Lincoln & Guba, 1985).

Interpretation

Interpretation is the process of moving from a summary of the data to explanatory thinking in a way that suggests paths for action (Heron, 1996). It is helpful in this process to incorporate methods that point to similarities and differences in the data in ways that enable all partners to move beyond specific examples and toward underlying issues and meanings (Brydon-Miller, 2001). In this stage, as in feedback and member checking, it is also helpful to use multiple methods (verbal, written, artistic and expressive) in order to engage all partners in the process.

Several levels of participation may be used as partners complete these interpretive steps (Mishler, 1986; Seale, 1999). Some have argued that all partners need to participate in all aspects of the interpretation if the findings are to inform action (Heron, 1996). This joint interpretation enables all partners to develop a thorough understanding of the nature of the relationships of interest. Compared to action based on varying levels of participation, action based on joint interpretations may be easier to carry out, because all partners understand why the particular course of action is appropriate (Mason, 1996; Mies, 1983).

However, in order to jointly interpret data, all partners have to learn the skills necessary to engage in this collective process of assigning meaning to the data. Even when presented with this opportunity, there may be some partners who are less likely to contribute at this stage. Some may feel that their time is better spent in other endeavors. Some may feel that their contributions are not sufficiently appreciated. Having one partner analyze the data and present the results to the other partners, the most common CBPR method of interpreting data (Seale, 1999), takes far less time and does not require all partners to develop skills that they may or may not see as beneficial. However, when partners are presented with data placed in a framework or categorized, the assumption is often made that all partners understand the categorization language in the same way that the partner who did the interpretation does (Seale, 1999). This assumption is typically inaccurate. In addition, those partners who have not been involved in the initial processes of data analysis and interpretation may not believe or agree with the information presented and may therefore be hesitant to take action based on the findings.

Regardless of the process used to make sense of the data, it is important to integrate the knowledge and understanding that community members have. This enables the development of *local theory* (Elden & Levin, 1991) and makes it more likely that actions taken based on the data will be appropriate for the community.

Moving from Interpretation to Action

Although interpretation of the results may signal the end of the in-depth interview process when using traditional methods, CBPR partners expect knowledge generation to be linked with action (Israel et al., 1998). The research processes and methods described throughout this book are cyclical, beginning with reflection, moving to action, and then shifting back to reflection. This cycle suggests that it is important to act based on what one knows at the time and to recognize the importance of learning from that action what needs to be done next (Heron, 1996). Because the process stages are always emerging and because different individuals and perhaps even different partners may be involved at different times in any CBPR partnership, the results from in-depth interviews and the actions taken in response to these findings may or may not make sense

to the individuals responsible for applying what has been learned. Moreover, the “best” action may be difficult to define because there are likely to be multiple perspectives among partners and even within partner organizations and groups. It is necessary to come to terms with and address these differences in order to move toward action.

IN-DEPTH INTERVIEWS IN THE PLANNING GRANT PROJECT

In order to illustrate how in-depth group interviews can be used in the context of a CBPR project, we will present an overview of the Planning Grant project and then outline how this project carried out each of the stages described above. The Planning Grant was conducted through the Saint Louis University School of Public Health (SLU-SPH) Prevention Research Center and included academic partners from SLU-SPH as well as partners from the Bootheel Heart Health Coalitions. These heart health coalitions are located in four economically depressed African American communities in rural southeast Missouri. The coalitions were formed in 1989, with the mission of reducing morbidity and mortality due to cardiovascular disease. They accomplish this mission by implementing programs to reduce risky health behaviors (Brownson et al., 1996, 1997). The coalitions were initially funded by the Centers for Disease Control and Prevention (CDC) through the Missouri Department of Health and later became functions of the Prevention Research Center (also funded by the CDC) at SLU-SPH. Each coalition is facilitated by a volunteer coalition chair who is a member of the community. Members of the coalition usually select the chair. The chair recruits members, facilitates meetings, and helps plan and implement activities.

The initial activities of the coalitions included efforts to change individual attitudes and behaviors as well as the social norms around cardiovascular disease risk factors (particularly smoking, diet, and physical activity). Their collective efforts have expanded in many ways since the partnership between SLU-SPH and the Bootheel Heart Health Coalitions began. The coalitions have increasingly moved from implementing programs defined by others to providing a menu of options for programs to working together to define their own programs. In addition, they are now placing more emphasis on creating changes in the structures of the physical environment that influence behaviors (for example, building walking trails to encourage exercise).

The current project, the Planning Grant, was added to these efforts in response to the requests of coalition chairs and members to learn more about assessment and planning and to expand the efforts of the coalitions to issues beyond cardiovascular disease risk reduction. This Missouri project was carried out as part of a four-site (Missouri, New Mexico, Louisiana, and Illinois)

CDC-funded project conducted through the Prevention Research Centers (PRCs) (for additional information, see CDC, 2005). The aim of this PRC project was to assess the extent to which locally defined dimensions reflected academically derived dimensions of community capacity and social capital (Goodman et al., 1998; Kreuter, Lezin, & Koplan, 1997; Putnam, 1993, 1995). The Planning Grant project thus had this goal, but it also had the goals of building community capacity for planning and engaging in community change projects (hence the name *Planning Grant*). These goals were added because the coalitions demanded that their collective work include the opportunity to use the learning as a springboard for action planning and intervention implementation. As a result the implementation of the Planning Grant included components that were both similar to and unique from the components of the other three PRC project sites.

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Type of Interview

The Planning Grant partners used a combination of interview approaches over the course of several meetings with some common and some unique participants in order to gather information and to build community support for action. As described earlier, given the recognition that context influences the information obtained and the desire to move from data collection to action using a collective, or partnership, approach, the interviews were conducted within the existing coalition groups (Mason, 1996; Mishler, 1986). An iterative, in-depth group interview process was used that enabled the gathering of information to be part of, rather than separate from, project planning and action. In addition, the partners' aim was that the community and coalition members would experience the interview process as a way to build community cohesion, consensus, and understanding. Lastly, it was hoped that this process would engage new community members in the coalitions' action planning process.

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Developing the Interview Guide

As part of this overall planning grant process, a structured interview guide was created to gather information about factors that facilitate and hinder community efforts in creating change and in working within and across various sectors (such as schools, businesses, and government) of communities: in other words, it was created to learn about dimensions of community capacity and social capital. A draft interview guide was developed by the local academic partners and reviewed by the local community partners in face-to-face meetings. The guide was then shared through teleconferences and e-mail with staff at the other three sites, who also shared their locally defined guides. Modifications to the locally defined guide were suggested that would allow some cross-site comparisons. These recommended changes were discussed with the chairs of each of the four local coalitions in face-to-face meetings. This process resulted in some revisions

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and at the same time was responsive to the unique needs of the Missouri coalitions. For example, one of the main concerns of the coalition chairs was that some questions asked respondents to discuss their “community” without first asking them how they defined their community. The guide was therefore changed so that participants were first asked to define their community and then asked to refer to this community for the remainder of the interview. (See Appendix L for a copy of the interview guide.)

In regard to conducting these group interviews, the chairs indicated that the process needed to

1. Be integrated into the coalitions’ already established meeting patterns (in terms, for example, of length of meeting time, number of individuals attending, and importance of using coalition activities to build community participation and skills)
2. Provide something back to the community instead of just taking from the community
3. Share information with community members in a way that was understandable and usable
4. Provide a blend of both information gathering and action planning

Therefore the overall interview process was broken down into multiple parts that were administered separately over a period of several meetings across all four of the coalition counties.

Recruitment and Data Collection

Given the goal to build community member involvement in coalition planning and activities, the interview process was conducted separately in each of the four counties, with only community members and coalition members from that particular county attending. In counties where a coalition had regularly scheduled meetings, the group interviews were conducted as part of, and hence at the same time and place as, these regularly scheduled meetings.

As they did for all other coalition activities, the coalition chairs recruited individuals to take part in all of the meetings. They invited members of their community who they thought would be interested in attending the meeting as well as those who might be willing to engage in the later planning and action phases of the project. The result was that approximately half of the participants in the group interviews were “regular” members of the coalition and half were individuals who, although familiar with the coalition, did not regularly attend coalition meetings. In each of the four counties, an average of twenty individuals attended each of the meetings in which the interviews were carried out (with the earlier meetings having more attendees than the later meetings).

Meeting 1. During the first meeting, participants formed small groups and created posters representing health in their communities. The academic partners stimulated the process by asking individuals to “create a poster that visually presents the health of your community. This can include both positive and negative aspects of health in your community . . . and you can define health as broadly as you think is appropriate.” Participants were divided into small groups of approximately five individuals and provided with poster board, pipe cleaners, glitter, construction paper, felt markers, glue, and scissors. Once the posters were completed, each small group explained its poster to the larger group. After all the presentations the academic partners summarized the common and unique features of the posters and facilitated a brief discussion to determine if any important ideas were missing. Meeting 1 took approximately one hour, and the proceedings of this meeting were documented with field notes and the posters themselves.

Meeting 2. During the second meeting, statistical information on many of the health issues identified in Meeting 1 was presented by the academic partners and discussed by the group. These data had been collected and summarized by the academic partners from public use data sets available through the Internet. These data included school graduation and dropout rates; unemployment rates; and diabetes, cardiovascular disease, and cancer rates. The information was presented along with information on where community participants could find such information for themselves in the future (for example, URL addresses were provided along with copies of some of the introductory Web site screens to illuminate how to navigate the system). Participants then discussed how the coalitions had addressed or could address these issues. Meeting 2 took approximately one hour and was documented through field notes.

Meeting 3. During the third meeting a video of a community development project was shown and used as a springboard for discussion of the ways the heart health coalitions have addressed issues in their own communities in the past and what they might do in the future. Meeting 3 took approximately one and one-half hours and was documented through field notes.

Meeting 4. At the fourth meeting, following the outline in the interview guide described earlier, participants were, first, asked to reflect on how they define their community. They were then asked to describe the strengths and challenges that they face in conducting change efforts in their respective communities, given how they had conceptualized health in the first meeting and the subsequent discussions. Broad questions were asked initially (for example, “What has helped the coalition to implement activities?”), followed by specific questions on the role of various community sectors, again based on the issues

discussed in Meeting 1 and the previously generated guide (for example, “How do the businesses in this community help the coalition to implement activities?”). These meetings were facilitated by the academic partners, with the coalition chairs assisting in facilitation, question clarification, and discussion initiation. This co-facilitation role was particularly important in helping community members to see that issues could be raised that might not be considered appropriate or well received in other settings (such as issues of organizational turf, institutional racism, and conflicts with local governmental agencies). Meeting 4 took approximately one and one-half hours and was tape-recorded and transcribed verbatim, with participant consent.

Data Analysis

The meeting transcripts were reviewed to ensure completeness and then coded by two coders who were part of the academic staff, using focused coding techniques (Strauss, 1987; Strauss & Corbin, 1990). The focused coding technique involved using the interview guide questions to establish categories (for example, business, school, and government facilitators and barriers). All information that did not fit in these categories was placed in an “other” category, and then this “other” category was reviewed and sorted into categories identified from the data themselves. This data analysis was done separately for each county.

Data Feedback and Member Checking

Data feedback and member checking was carried out at a fifth meeting in each county. Meeting 5 began with the academic partners presenting participants with written (bulleted) summaries of the results of the data analysis (feedback) and asking them to discuss the accuracy of these summaries and to make changes as appropriate (member checking). These meetings involved not only community members who had taken part in data collection but also community members who had not been part of the previous discussions. Those who had not participated previously either provided validation of the prior conversation or, in some cases, questioned the accuracy of various comments. In addition, those who had participated in the previous meetings identified areas where the summaries did not reflect the discussion. This process enabled the project partners to identify areas where the summaries were inaccurate. For example, during the interviews the participants had discussed the ways in which local businesses both facilitated and hindered community health and coalition activities, and the participants in one county had stated that local businesses facilitated coalition activities by contributing incentives and prizes. However, during the feedback process, it was pointed out that although this *was* what the participants had said, it was not accurate, as businesses had stopped providing these incentives and prizes many years ago. The participants who had provided this information said that they had done so because they thought the partners

“wanted” something positive and this was the only thing that came to mind. This discussion and the next part of meeting 5 (described in the following section) were tape-recorded and transcribed, with participant consent.

Interpretation: Responding to Existing Frameworks and Creating New Ones

The remainder of Meeting 5 involved asking the participants to critically reflect on the extent to which the summaries (with the changes made during the first part of the meeting) fit into existing academic dimensions of community capacity, and to expand on these existing conceptualizations as appropriate. This process entailed providing each participant with a list of the community capacity dimensions found in the literature (such as community participation, leadership, skills, resources, connections, sense of community, community history, community power, and community values) and the academically derived definitions of these dimensions (Goodman et al., 1998). After a review and discussion of these dimensions, the participants were asked to collectively assign the locally generated summaries, or categories, from the group interviews to one or more of these dimensions, or *buckets*, and to identify any new dimensions they thought were not reflected in the literature. Large signs with the names of each dimension (bucket) had been put on the walls of the meeting room, each in a different color (community participation in purple, leadership in orange, and so on). The facilitator then reviewed each summary and asked participants to put it in the appropriate bucket by taping the statement on the wall under the sign of their choice (for example, community participation or leadership). Each of these summary statements could be placed in more than one bucket. The participants were then asked to discuss and critically reflect on the reasons why they had assigned the summary statement to a particular bucket, or dimension, thereby further refining the *local operationalization* of that dimension. These discussions were facilitated by the academic partners, with participants joining in by asking each other to clarify why they thought a statement belonged in a particular bucket and in some instances assisting with putting the summary statements on the wall underneath the appropriate sign. Each of the two Meeting 5 discussions took approximately two hours.

Although it is beyond the scope of this chapter to fully report on the findings (see Baker et al., 2002), a key result was that the participants indicated that they found the academically defined community capacity dimensions useful; however, they did not see them as acting independently to influence change. For example, community history was seen as influencing community participation and interorganizational networks, which in turn influenced community power and resources. They also noted that the dimensions inadequately reflected the importance of physical and environmental structures, and more important, did not address what they saw as two primary deterrents to change—institutional racism and lack of economic development.

Action Planning

The project partners in each county then met (Meeting 6) to determine how to use the lessons learned from these analyses for action planning. In each county this involved reviewing the main issues and challenges faced in the local community, along with the capacities they had also identified. They then prioritized the issues so that each coalition determined one main issue to focus on. The criteria used for prioritizing had been developed by the academic partners and presented to each community for changes and additions. The final criteria stipulated, for example, that the issue had been raised during the in-depth interview process, that a number of people were willing to work on the issue, and that the issue moved the coalition toward a focus on social or community factors rather than individual factors. Each coalition decided on an issue that reflected the interests of the majority of the participants. Once an issue was chosen, each coalition brought partners, often including individuals and organizations who had not taken part in the earlier data collection process, into this action phase of the process. A mini-grant was provided by the Planning Grant effort to fund one project per coalition, and community and academic partners worked together to plan and develop a budget for each of the projects. The planning included jointly defining the goal, the specific objectives that would help the coalition achieve the goal, the specific activities that would be conducted to achieve the objectives, and the evaluation strategies that would document the process and accomplishments. The planning process also paid explicit attention to the ways in which the community capacity dimensions discussed earlier influenced particular activities, so that the activities either attempted to build on community strengths or to work around challenges. We will discuss the interpretation and action planning process in one of the coalition counties, Pemiscot County, as an illustrative example.

Following Meeting 5 in Pemiscot County, the academic staff typed up the heading and the summary statements for each community capacity dimension, or bucket. A subsequent review by the coalition members of the placement of the statements in each bucket showed that many of the issues of concern focused on community participation and resources. For example, one issue identified in Pemiscot County was a lack of social integration and an absence of adult men in community activities. The coalition and academic partners held subsequent meetings to further refine this issue. Participants in these discussions stated that the absence of men could be seen, in part, as a function of inadequate job opportunities. These inadequate job opportunities were thought to have the potential to minimize a man's self-worth and hence his sense of having something to contribute to others. The coalition therefore decided to focus on creating a male mentoring program that would develop and offer a GED program. This program would lead to opportunities for vocational training

and subsequently the development of local job opportunities specifically for men. The aim was that the men in these programs would begin to see their own strengths and potential and would also discover ways in which they could use these to achieve their personal goals. This would in turn result in improved self-esteem. In light of their new self-perception, these men would be asked to serve as role models and mentors to younger men.

In developing the program the coalition was able to reflect on and use some additional findings from the previous data collection, feedback, and analysis activities. In particular, it was noted that certain institutions (those already part of existing interorganizational networks, for example) were more likely to work with the local community and that others (those in which institutional racism was evident, for example) were less likely to do so. Moreover, the coalition noted that churches and religious institutions were sources of strength, trust, and power in the community and would thus be excellent places in which to begin a new program.

The coalition therefore worked with a local faith-based, nonprofit organization and brought together multiple partners to jointly plan and implement program activities. The coalition was able to bring GED classes to the community. Transportation was provided, and motivational speakers came to the classes to encourage completion of the GED program as well as movement toward other life achievements. As a result of the relationships established by the GED program, participants in that program have been able to increase their computer and job-readiness skills through additional programs provided by various partners. There are currently two GED program sites in the county, with participation ranging from five to twenty students. The men in the GED courses have also been active in mentoring younger men by participating in a “back to school” rally and encouraging them to stay in school.

The outcomes go beyond these specific program activities. For example, various organizations in the local community, including the local housing authority, local businesses, and an outreach ministry, have now worked together in new ways or in ways that had not been seen for some time. The CBPR process intentionally brought together institutions that were identified as community strengths in ways that have enhanced the GED program as well as other programs in the community.

CHALLENGES AND LIMITATIONS

Many challenges and limitations are encountered when using the type of in-depth group interview process described in this chapter in a CBPR project, including the need to deal with individuals’ and organizations’ lack of understanding of or time for CBPR, to recruit appropriate participants, to maintain

consistent participation, to balance coalition activities, and to allow for changes in direction and finances.

Dealing with lack of understanding of or time for CBPR. Although the stages of reflection, action, and further reflection are critical to community-based participatory research, they are not always easy and smooth to implement nor linear in their process. Ideally, all partners would understand the full process prior to initiation of the CBPR project; however, much of the process is developed jointly as the partnership moves forward and thus cannot be fully defined ahead of time. In part individuals create and learn a process by being engaged in it (Greenwood & Levin, 1998). It is our experience that several iterations of and multiple ways of engaging in the process may be required to understand what is involved. Some have argued that this type of cycling is also important for ensuring validity of the findings (Greenwood & Levin, 1998; Heron, 1996). This reality creates challenges in conducting the in-depth interviews and moving toward action in that many individuals may engage in the first stages and then not be interested in further participation in what may be perceived as a loose, noncontrolled process. Moreover, this particular effort took almost three years from initiation to implementation of action steps. Many individuals from a community may not see the benefit of and may become very frustrated with what could be viewed as a drawn-out process. Alternatively, many academic partners may not have the patience, support, or financial ability to work with communities over such a time period to define strategies in this way.

Recruiting appropriate participants. Another challenge is participant recruitment. In the Planning Grant project the coalition chairs recruited all participants. Although this was advantageous given the chairs' knowledge of the community, this approach has certain limitations. For example, although the academic partners indicated what would be involved and the types of participation that would be most appropriate, at times coalition chairs may have invited the people they were most familiar with rather than those who would be most useful in providing diverse perspectives.

Maintaining consistent participation. Maintaining consistency of participant involvement across different stages of the in-depth group interviewing process is a challenge. There are advantages to having the same individuals involved in all stages: for example, it increases participants' understanding of how the process moved from one stage to the next. However, given the numerous demands on people's time, it may not be possible or realistic to obtain this level of involvement over a multiyear period.

Balancing coalition activities. A related issue was balancing the various coalition activities. The interviews and action planning described in this chapter occurred at the same time that coalition members were engaged in other coalition activities, such as health fairs and senior programs. Given that the

communities were small, it was often challenging to ask the people to participate in the processes described here when they were also committed to working on other coalition activities. It was critical to acknowledge these other activities to ensure that the interviews and action planning did not take away from other activities and overburden community members.

Allowing for changes in direction and finances. It is important to allow and plan for the evolution, or unfolding, of this work. For example, over time there may be a change in the issue on which the partners initially decided to focus. The initial data and summaries from the in-depth interviews may suggest one issue that seems appropriate for action, but the analysis, feedback, and interpretation phases of this process may suggest an alternate issue once people have assessed the barriers or the enthusiasm for addressing the issue. This can lead to changes in partner interest as well as changes in anticipated budget allocation. This possibility highlights the importance of ensuring that the project resources are not fully expended at one time and that budget allocations allow for some unanticipated expenses.

LESSONS LEARNED AND IMPLICATIONS FOR PRACTICE

The partners in the Planning Grant project have learned many lessons by implementing in-depth group interviews and carrying out the subsequent action planning within the context of a community-based participatory research effort.

Trust. First and foremost, as with all CBPR activities, the partners must have established some element of trust, and all actions must function to build rather than destroy this trust. Important in this process are partners' familiarity with each other's environment and language, a willingness to question issues when they are not clear, and a willingness to clarify issues once they are questioned. In conducting in-depth interviews, issues of trust influence everything from the development of the guide to the analysis and interpretation of the data to the attention paid to the needs of each partner regarding the use of the data (for example, for publication only or for action).

Co-facilitation. Related to the issue of trust is the important issue of co-facilitation by academic and community partners during the data collection and interpretation processes. In the Planning Grant project, the chairs of each coalition assisted by helping to initiate dialogue during the interview process, often by raising key issues that community members were not certain could be raised within the context (for example, racism and a history of neglect by various local institutions). In addition, the chairs helped to ensure that the participants understood the intention of the questions by clarifying the language as needed. The chairs also helped the academic partners understand