This study focuses on the Implementation Community Collaborative Board (I-CCB) to identify members’ anticipated contributions to and returns from the I-CCB; examine whether or not members achieved these contributions and returns over time; and explore barriers and facilitators that influenced accomplishments. Longitudinal study with repeated semi-structured in-depth interviews; baseline captured anticipated contributions and returns; 6- and 18-month follow-ups short- and longer-term achievements. We used content analysis to code/reduce text into variables, describe, count and compare categories. Participants anticipated involvement in I-CCB dynamics/governance and in research tasks/procedures. Anticipated returns included social support. Participants exerting influence on I-CCB’s research agenda stayed the same over time. Participants conducting research doubled between follow-ups; those writing grant proposals increased by 50%. Participants receiving emotional support remained the same.

Challenges: meetings steered by researchers; lack of time; use of jargon. Facilitators: outreaching to community; being affected by HIV; having overlapping identities/roles as researcher, service consumer and/or practitioner. Research partners can maximize facilitators, redress barriers and improve advisory board members’ retention. Findings may help optimize the functioning of advisory boards worldwide.

Key words: community advisory board; engagement and retention; CBPR; HIV/AIDS

INTRODUCTION

Community Based Participatory Research (CBPR) calls for collaboration/partnership between researchers and communities (e.g. residents, practitioners, local leaders) in order to align research agendas with community priorities (Wallerstein and Duran, 2006). Research involving community partners engenders greater rigor, external validity and usefulness (e.g. translatability) than does research conducted solely by researchers (Lasker and Weiss, 2003). Researcher–community partnerships (‘partnerships’) foster trust between communities and research institutions and improve appropriateness of measurements, accuracy in data interpretation and dissemination to practitioners and community members (Larkey et al., 2009; Pinto et al., 2010; Schmittidiel et al., 2010; Wallerstein and Duran, 2010; Dong et al., 2011; O’Brien and Whitaker, 2011).

Government and private funding agencies (e.g. World Health Organization and the US National Institutes of Health) often require participation of practitioners and community members in scientific research via advisory boards, usually called Community Advisory Boards (CABs). In 1990, advisory boards were instituted in the USA by the National Institute of Allergy and Infectious Diseases. Since then, advisory boards have become the key strategy for addressing
community concerns in HIV research design and prioritization (Cox et al., 1998). Advisory boards offer opportunities for iterative processes (e.g. power sharing, problem solving and mutual aid) between researchers, policy makers and community members for addressing community concerns about scientific inquiry (Morin et al., 2003; Delaney et al., 2012). Currently, advisory boards are used worldwide to organize community–researcher partnerships and to improve relevance of research questions and findings, ethical procedures and access to participants (Israel et al., 1998; Wandersman et al., 2008).

Prior research has indicated that there is often a separation between researchers and advisory board members, by describing the latter as performing procedural tasks to assist the former and by focusing on what researchers expect from community partners while neglecting to say what community partners might expect in return (Cargo et al., 2008). Both researchers and their partners envision involvement in substantive aspects of research, such as specification of aims, data analysis and dissemination. But community partners are often involved only in procedural tasks (e.g. recruiting and communicating risks/benefits) (Cox et al., 1998; Lantz et al., 2005; Morin et al., 2008; National Cancer Institute, 2010). Advisory boards have been thus portrayed as providing a ‘rubber stamp,’ rather than substantive input (Cargo et al., 2008). However, previous research, descriptive and cross-sectional, is insufficient to corroborate these assertions.

The present longitudinal study focuses on a board whose membership unanimously decided to call Implementation Community Collaborative Board (I-CCB). The term I-CCB is a variation on ‘Facilitators’ to meeting expectations are those factors crucial to sustaining partnerships. Researchers’ incorporation of partners’ input improves partnership functioning; researchers are viewed favorably when they respond to inquiries promptly and display social manners consistent with community norms (Morin et al., 2003; Ross et al., 2010; Dulmus and Cristalli, 2012). Board structure and governance help fulfill all partners’ expectations by encouraging conflict resolution as a group (Jagosh et al., 2012). Planned activities help establish partnership missions (Morin et al., 2003; Pinto et al., 2008), which, in turn, improve the frequency of meetings and attendance (Cox et al., 1998; Shalowitz et al., 2009).

The makeup of advisory boards change over time and drop-out is common, but most board-informed research is cross-sectional (Morin et al., 2003). Advisory boards are too small for inferential analyses. Aggregating data from several

Summary of the literature
The literature indicates that community residents and practitioners value social support they draw from research partnerships (Lasker and Weiss, 2003; Ross et al., 2010). They anticipate working with a diverse group toward common objectives (Mosavel et al., 2005; Minkler et al., 2008; Pinto et al., 2008; Stacciarini et al., 2011) and contributing to research agendas (Castleden et al., 2008; El-Bassel, 2008). In return, they hope to learn new skills and expand their social/professional networks (Lantz et al., 2001; Spector, 2012). Practitioners partnering with researchers expect to improve the services they provide (Bellamy et al., 2008). Researchers anticipate community partners will elucidate community priorities (Thompson et al., 2009).

‘Barriers’ to making contributions and receiving returns include disparities between researchers’ and partners’ education/training and access to financial and social resources (Schulz et al., 2001; Israel et al., 2006). Researchers’ use of jargon may exclude their partners from discussions (Delman, 2012). Differences in social status and communication styles may prevent development of a common language (Newman et al., 2011). Research institutions usually receive funding, while communities have little say as to how funds are used. Lack of compensation for community partners and competing demands in their lives interfere with their involvement (McKay et al., 2007). Practitioners who ‘buy into’ research may become discouraged by power struggles (Wallerstein, 1999), distribution of resources (Champeau and Shaw, 2002) and professional interests (e.g. research versus practice) (Corbie-Smith et al., 2002).

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The makeup of advisory boards change over time and drop-out is common, but most board-informed research is cross-sectional (Morin et al., 2003). Advisory boards are too small for inferential analyses. Aggregating data from several
boards fail to capture local knowledge, priorities and research interests. Most advisory boards are assembled after a study is funded and aims/procedures determined (Newman et al., 2011). To overcome these limitations, we assembled the I-CCB ($n = 30$), and conducted a longitudinal study to identify members’ anticipated contributions and returns and to explore barriers and facilitators that influenced members’ involvement. In a time of contracting budgets, this research is critical; it demonstrates empirically how to help advisory boards’ members, researchers and community partners worldwide meet expectations and improve research processes and outcomes (Viswanathan et al., 2004; Khodyakov et al., 2011; Jagosh et al., 2012).

METHODS

Implementation Community Collaborative Board

This article is based on data from members of the Implementation Community Collaborative Board (I-CCB) affiliated with Columbia University School of Social Work. Details of the I-CCB’s formation, structure and group dynamics are published elsewhere (Pinto et al., 2011). We built the I-CCB as a network whose mission and governance, incorporated in a Memorandum of Understanding, were to conduct ongoing research on HIV/AIDS, incarceration and substance abuse in underserved communities. The workings of the I-CCB reflect the Theory of Balance and Coordination (Litwak et al., 1977).

Theory of Balance and Coordination suggests that knowledge/skills of local groups (e.g. community residents) can complement those of researchers. By balancing and coordinating substantive and procedural tasks, matching varied knowledge/skills, socially and professionally diverse individuals can accomplish shared goals better than either could alone. It is not necessary, nor feasible, that researchers and lay community representatives replicate one another’s tasks, nor acquire the same knowledge. Rather they ought to inform each other through iterative processes that integrate their diverse styles, skills and perspectives to create research that is relevant and rigorous. Theory of Balance and Coordination helped guide the I-CCB composition by suggesting that members be selected based upon each member unique and experiences and the ability to exchange information thoughtfully, as well as relate well with a large diverse network. Consistent with the Balance Theory, these characteristics were crucial in order to fulfill the promise of capitalizing upon a diverse range of skills and knowledge. The theory also guided the work of the I-CCB by ensuring that the projects undertaken by the group were not chosen haphazardly, nor by a dominant voice. The I-CCB prioritized projects that were most important to the group and took care to elicit the opinions of each member in the group at every meeting so that those who tended to speak less or were reticent had an opportunity to offer their input and contribute unique knowledge and skills.

The I-CCB comprises a diverse constituency (e.g. academic and community representatives) with differing skills (e.g. research and practice) and demographics (e.g. race and education). Following Theory of Balance and Coordination’s tenets, members co-facilitate and attend quarterly and sub-committee meetings, retreats, seminars on research design and informal gatherings. Sub-committee members (5–8) perform research tasks that match their skills and all members receive stipends at each meeting.

I-CCB recruitment

Recruitment followed a purposive, snow ball approach. It entails recruiting one or more initial study participants and asking them to recommend. Because the I-CCB conducts research in specific areas of interest, we also required, from recommended participants, a stated commitment to preventing HIV, incarceration and/or substance abuse as an inclusion criterion. Initially, four researchers recommended service consumers and practitioners with whom they had served on other advisory boards, who then recommended others from their social/professional networks. The I-CCB included eight behavioral researchers, one doctoral student, two post-doctoral fellows, one field educator, eight providers, five administrators, one pastor and four service consumers. Nineteen were females and 11 males. Nine were African-American, seven Latino/a, nine Caucasian, two Asian/Pacific Islander and three multi-ethnic/racial. Ages ranged from 33 to 60. Three members opted out of the study because they changed jobs and/or moved. The final sample included 27 participants.
Design and procedures
We used a longitudinal design with repeated, semi-structured in-depth interviews at baseline and six- and 18-month follow-ups to generate a deep understanding of how participant-identified facilitators and barriers influenced their contributions and returns over time. Our design is consistent with research about changes associated with a perception or experience over time (Ployhart and Vandenberg, 2010, pp. 515–516). The baseline captured contributions and the returns anticipated by participants. Between baseline and follow-ups, the I-CCB matured, and its members faced facilitators and barriers. By repeating baseline questions, we captured short-term accomplishments at six months and longer-term at 18 months. To validate results, we used triangulation (Richards, 2009, p. 140), cross-verification from digital recording and transcription of I-CCB meetings and records (e.g. attendance) of participants’ involvement in I-CCB activities. Meeting transcripts and written records validated members’ attendance, their involvement in governance, and facilitators and barriers.

Interview protocol and procedures
The protocol reflected key constructs (italicized) of the Theory of Balance and Coordination. I-CCB members’ indigenous and technical knowledge/skills were assessed by inquiring about their personal, research-related and practice-related experiences, including involvement in other advisory boards (paid or volunteer). To assess potential and actual involvement in research tasks/procedures, we asked about anticipated (baseline) and actualized (follow-ups) contributions and returns. The Theory suggests that partners with complementary knowledge/skills sets ought to balance and coordinate all research tasks. The protocol thus included questions about barriers and facilitators to participating in I-CCB activities and performing research tasks. Because the performance of such tasks could be influenced by I-CCB dynamics, the protocol included prompts to explore perceptions about involvement in I-CCB activities. Follow-ups included baseline questions, in addition to questions about board governance and social support board members developed after the baseline.

We obtained approval from the appropriate IRB and informed consent from participants. Interviews, conducted by Master’s level assistants, were digitally recorded and transcribed verbatim. Participants received a $40 incentive per interview. Baseline interviews lasted 30–45 min and follow-ups averaged 45 min. Standards of good measurement ensured interview protocol validity (Morse et al., 2008; Neuendorf, 2002, p. 115); we developed questions in consultation with service consumers and providers who were not I-CCB members. The Principal Investigator (PI), who was also an I-CCB facilitator, has expertise in protocols to study research partnership. To ensure protocol fidelity, the PI and another researcher outside the I-CCB reviewed nine randomly selected interviews and their transcriptions to ensure that interviewers adhered to scripted questions and used prompts appropriately. Before interviews began, the protocol was shortened and prompts added to tap specific facilitators and barriers. A modified version was used in follow-ups to identify barriers and facilitators and to find out if participants anticipated contributions and returns were actualized. To create continuity, before each follow-up, the interviewer provided a brief summary of the previous interview.

Analytic strategy
CBPR upholds co-learning and equitable partnerships in which all contributions are equally valued (Israel et al., 1998). I-CCB members agreed that they embodied overlapping identities/roles. For example, an HIV prevention researcher might have been a practitioner and/or a consumer of HIV services. Characterizing I-CCB members solely by titles/identities would not have been an accurate representation. Therefore, they were not separated (i.e. researchers, consumers, providers) for data analysis. We acknowledge that though CBPR upholds co-learning and equitable partnerships, this is an ideal not always achieved.

Baseline and follow-ups were organized into case profiles (Eisenhardt and Graebner, 2007) averaging 20 single-spaced pages, making the three sequential interviews the analytical unit. Three coders analyzed/interpreted the data using well-documented procedures for content analysis of case profiles (Creswell, 2007, pp. 208, 210; Neuendorf, 2002, p. 53). To ensure interaction and full exploration of longitudinal data, they conducted independent analyses instead of using software for data reduction (Lee and Esterhuizen, 2000; Padgett, 2011, p. 191). Content analysis was used to put text into categories (i.e. variables), to
describe, count and compare variables within case profiles (Creswell, 2007, p. 152; Kothari et al., 2009; Zhang and Wildemuth, 2009); and to strengthen internal validity by allowing coders to identify categories whose relations were richly described in the text (Neuendorf, 2002, p. 115). Content analysis was a good strategy because it allowed us to systematically examine textual material, quantify the number of incidents of the phenomenon in question, analyze the relationships of quantified values to describe the phenomenon and draw inferences about its meaning.

**Data sampling, establishing codes, marking and selecting text**

First, coders read independently and subsequently discussed two case profiles to assess data quality. Coders had 15 two-hour meetings for debriefing to ensure rigor, define codes and discuss interviews (Cobb and Forbes, 2002). Coders discussed impressions about the first two interviews and engaged in structured coding (Creswell, 2007, p. 210) by seeking categories (contributions and returns) suggested by the interviews (Denzin and Lincoln, 2000, pp. 780–782; Miles and Huberman, 1994, pp. 56–58). Coders then reviewed another five profiles to confirm the occurrence of categories of interest, including barriers and facilitators, and to develop a codebook with definitions and quotes exemplifying each category. Coders used member check (Padgett, 2011, pp. 212–213), consisting of validation of the codebook and the operational definitions of categories by two study participants. Operational definitions allowed coders to identify the same variables in multiple case profiles (Creswell, 2007, p. 210).

The designated codebook keeper maintained a record of refinement of categories (Padgett, 2011, pp. 176–177) as coders collapsed and reorganized categories (Morse, 2008), and condensed interrelated variables into themes expressed in interviews. Coders identified anticipated contributions and returns (baseline) and looked for text in follow-ups to identify participants’ accomplishments. They also categorized barriers and facilitators and organized these into themes. Final codes reflected 100% agreement among coders. Saturation occurred after the 12th case profile, when no other categories emerged (Charmaz, 2000, p. 528). Coders analyzed the 15 remaining interviews, selected text representing final categories and provided the text to two participants (member check) for them to validate the representativeness of final categories (Padgett, 2011, pp. 212–213).

To examine members’ accomplishments, we used descriptive analyses (Neuendorf, 2002, p. 53). In the baseline interviews, we detected participants’ anticipated contributions and returns; we then looked for text, in each follow-up, to substantiate whether or not a participant had achieved anticipated contributions and returns. We then created a data file with all possible contributions and returns and assigned ‘yes’ or ‘no’ labels to each category in both follow-ups.

**RESULTS**

Table 1 summarizes longitudinal results. Participants anticipated 11 contributions and returns. Four contributions reflected I-CCB processes and group dynamics and three reflected research tasks/procedures. Anticipated returns included informational, tangible and emotional supports. We validated contributions by examining transcriptions of I-CCB meetings and records of involvement in I-CCB activities. Table 1 contains quotes reflecting participants’ feelings and opinions. To demonstrate a longitudinal progression, we placed baseline data alongside quotes that reflected statements participants gave in follow-ups. A quote illustrating a follow-up statement is not necessarily taken from the same participant in the baseline, because many participants reported unanticipated returns and contributions.

Table 2 shows the number/percentage of participants who identified contributions and returns in the baseline and the number/percentage of participants who reported accomplishing them over time. We also provided the ratio between 18-month and 6-month follow-ups.

**Partnership processes and dynamics**

The I-CCB has identified key group dynamics that help board members’ accomplish I-CCB’s objectives. Dialectic process helps I-CCB members exchange personal and professional information by speaking at meetings and problem solving helps members achieve consensus around I-CCB processes (e.g. type of research they wish to pursue) (Pinto et al., 2011). At baseline, participants anticipated attending (17, 63%) and speaking (12, 44%) at meetings; influencing the I-CCB research agenda (11, 40%); and research-related problem solving (6, 22%). Ninety-six percent regularly
attended meetings at 6 months, but that percentage fell by 20% at the 18-month follow up. Similarly, 93% spoke at meetings at 6 months, but that also fell by 20%. The percentage of participants who engaged in problem solving fell by 40% between the 6-month (15, 56%) and 18-month (9, 33%) follow-ups. Nonetheless, the percentage of participants (15, 56%) who perceived themselves as exerting influence on the I-CCB’s research agenda stayed the same over time.

**Research tasks and procedures**

Participants’ anticipated conducting research, e.g. recruiting, specifying aims and dissemination.

<table>
<thead>
<tr>
<th>Partnership processes and dynamics</th>
<th>Attend meetings</th>
<th>‘My initial expectation was to attend meetings’</th>
<th>‘I think I made most meetings. I might have missed one’</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Speak in meetings</td>
<td>‘To voice my experiences from the field of twenty years’</td>
<td>‘I bring information from the community and perspective of life. I speak of religious perspectives and knowledge’</td>
</tr>
<tr>
<td>Exert influence</td>
<td></td>
<td>‘There’s a gain in being able to influence the process’</td>
<td>‘Everyone was involved in the process through shared decision making where everyone voiced their opinions’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘I feel my responsibility is to let them know agenda items whenever needed’</td>
<td>‘I brought organization to the board such as shaping our research agenda’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘My expectation is to develop and expand the board’</td>
<td>‘I was help the board by recommending people’</td>
</tr>
<tr>
<td>Problem-solve</td>
<td></td>
<td>‘I think there’s always going to be a stress ... understanding inherent conflicts and deciding as a group how much needs to be attended to is very important’</td>
<td>‘We had disagreements on how to deal with designs ... we voted on issues and on how are we going to accomplish that issue. We negotiate and give each other respect and an opportunity to voice our opinions’</td>
</tr>
<tr>
<td>Research tasks and procedures</td>
<td>Conduct research</td>
<td>‘It’s an effort to get together service providers, clients and university collaborators to develop research and design projects and to get them funded to further those agendas’</td>
<td>‘I have collaborated with X, a service provider, in the board on a research project that will likely get funded for the next five years’</td>
</tr>
<tr>
<td></td>
<td>Develop grant proposals</td>
<td>‘I’d like the board to write a grant related to an HIV/AIDS intervention using a community collaborative board model’</td>
<td>‘We are working on a grant to test effectiveness of a trauma-based HIV intervention for female offenders’</td>
</tr>
<tr>
<td></td>
<td>Perform health promotion outreach</td>
<td>‘I see this venue to learn more so this information can enlighten me and I would be able to come back and communicate additional information to my community’</td>
<td>None found</td>
</tr>
<tr>
<td>Social Support</td>
<td>Lend emotional support</td>
<td>‘I’d like to feel at ease to say what I feel, hear them and open up’</td>
<td>‘They made me feel good about myself ... it was the atmosphere that makes me feel good about myself’</td>
</tr>
<tr>
<td></td>
<td>Lend tangible support</td>
<td>‘Every day if B could hire me for an hour, I could have a job in the board and get a computer’</td>
<td>‘D put food in my house, she works at a pantry. I told her that I didn’t have food. She told me I’ll bring you food’</td>
</tr>
<tr>
<td></td>
<td>Lend informational support</td>
<td>‘I look forward to developing relationships as much as possible to learn more about the information in their fields’</td>
<td>‘People reach out. If there is a job available, people discuss the information, there seems to be a network’</td>
</tr>
<tr>
<td></td>
<td>Learn more about research</td>
<td>‘I’m looking to learning more within this model of collaboration involving different types people and learn more to do research’</td>
<td>‘I have increased my knowledge base about research by gathering information ... I believe I have been able to expand more resources by learning about research’</td>
</tr>
</tbody>
</table>

**Table 1: Longitudinal summary of anticipated contributions and returns and respective accomplishments**

<table>
<thead>
<tr>
<th>Anticipated contributions and returns (baseline)</th>
<th>Accomplishments (follow-ups)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attend meetings</td>
<td>‘I think I made most meetings. I might have missed one’</td>
</tr>
<tr>
<td>Speak in meetings</td>
<td>‘I bring information from the community and perspective of life. I speak of religious perspectives and knowledge’</td>
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<td>Perform health promotion outreach</td>
<td>‘I have collaborated with X, a service provider, in the board on a research project that will likely get funded for the next five years’</td>
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<td>Learn more about research</td>
<td>‘I have increased my knowledge base about research by gathering information ... I believe I have been able to expand more resources by learning about research’</td>
</tr>
</tbody>
</table>
The number of participants conducting research doubled between follow-ups; those writing grant proposals increased by 50%. No participant reported engaging in outreach.

Social support

Participants anticipated receiving emotional, tangible and informational supports and increasing their knowledge about research. The number who reported receiving informational support decreased by 20% between follow-ups. However, there was a 20% increase in the number who received research-specific information. Participants receiving emotional support remained the same over time, while those receiving tangible support decreased by 40%.

Barriers and facilitators

Table 3 shows barriers and facilitators. Key barriers included: partnership goals steered by researchers (24 participants; 91%); lack of time for research tasks/procedures (22; 81%); meetings dominated by researchers (18; 67%); and use of jargon (18; 67%). Facilitators included: prior experience in design/procedures (20; 74%), in data analysis (4; 15%), and as research participant (8; 30%); and experience providing social/health services (17; 63%), providing outreach to communities (8; 30%), and being infected/affected by HIV (6; 22%). Twenty-four (89%) participants reported that overlapping identities—as researchers, community members and/or practitioners—were important facilitators.

DISCUSSION

There was an overall decrease in the number of members who regularly attended and spoke at meetings. Members’ perceived engagement in problem-solving decreased, while a perceived ability to exert influence spiked between baseline and 6-month follow-up and then stayed the same between follow-ups. These findings reflect group dynamics theory and practice (Breton, 1990; Steinberg, 1997; Becker et al., 2005) in that key dynamics identified by I-CCB members (i.e. dialectic process and problem solving) (Pinto et al., 2011) were more frequently used in the inception
of the I-CCB and waned over time. There was a consolidation of roles and responsibilities among I-CCB members that allowed more flexibility around attendance. Recruitment occurred over a period of 1 year; by the time all participants had given baseline interviews, sub-committees had formed, and some members attended from one to several sub-committee meetings on a regular basis. This may partially explain a decrease in attendance due to members’ overlapping commitments and lack of time (McKay et al., 2007).

The perceived decrease in problem solving (e.g. developing recruitment strategies of hard-to-reach individuals) also reflects group dynamics and the Theory of Balance and Coordination. In the developmental stage of groups, members engage more intensely in mutual aid, discussions and activities (Steinberg, 1997). With the passage of time and based on members’ unique knowledge/skills, a balance and coordination of roles (Litwak et al., 1977) develops and specific problem solving wanes (e.g. defining the I-CCB research agenda). Supported by the fact that over 50% of participants perceived themselves as influencing the I-CCB agenda, we conclude that we achieved a meaningful balance/coordination of knowledge/skills that we then used to distribute research-related tasks among the membership. For example, members, who identified primarily as service providers and consumers, exerted influence by bringing ‘community voices’ into research design of I-CCB-related projects (Castleden et al., 2008; El-Bassel, 2008; Jagosh et al., 2012).

Procedural contributions included recruiting I-CCB members, developing agenda items and co-chairing meetings. Substantive involvement—specifying research objectives, writing grants and designing protocols—also increased over time. However, anticipated health promotion outreach decreased. Intriguingly, the I-CCB conducted several outreach projects. For example, members provided health education to individuals attending events where an I-CCB-led Photovoice was exhibited. But most members regarded ‘outreach’—health fairs and distribution of written materials—as unrelated to research and Photovoice as exclusively research. This affirms the need for further research on how best to develop a common language among diverse board members (Lasker and Weiss, 2003).

Training on research-related issues provided at the I-CCB inception continued over time; however, exchange of personal and professional information, high in the beginning, waned as I-CCB members became acquainted with one another. Informational support and advice about social services and/or career development (Lantz et al., 2001) were common in the first year. Emotional support included ‘feeling heard,’ being praised and receiving recognition (Lasker and Weiss, 2003; Ross et al., 2010). As shown in previous research, emotional support empowered I-CCB members to educate their peers about research in their social and professional networks (Pinto et al., 2008). Six members anticipated receiving tangible support—food at I-CCB events, referrals to services and stipends—but only three reported receiving such support at 18 months. Participants who did not receive anticipated support went through difficult times due to sickness and loss of work and/or welfare benefits. This suggests that funding agencies ought to earmark a portion of research budgets and require it to be used by research institutions to help defray the cost of living, particularly of low-income partners.

Longitudinal findings suggest that facilitators and barriers explain how participants accomplished anticipated contributions and returns. Prior involvement in research had familiarized participants with design/method and thus facilitated present research tasks/procedures. Personal experience with HIV/AIDS enhanced empathy for others vulnerable to this and other conditions. Having overlapping identities facilitated integration of scientific with indigenous knowledge and practice wisdom. However, jargon and discussions dominated by researchers challenged other members’ understanding of discussions (Schulz et al., 2001; Israel et al., 2006; Delman, 2012), and lack of time due to competing obligations reduced members’ attendance. We contend that advisory board functioning, member engagement and retention can be enhanced by maximizing facilitators while addressing barriers. Acknowledging researchers as board members highlights the overlapping identities of all members and the equal value of their contributions; this helped to facilitate I-CCB members’ accomplishments.

Though we did not split I-CCB members into categories, barriers did affect members somewhat differently. Members with less formal education (e.g. service consumers) had difficulties understanding research jargon and felt curtailed in their abilities to contribute to grant writing and specifying aims and methods. Attempts were made to include all members by soliciting their participation during meetings. The PI often met
members outside of regular meetings and created an alternative space to clarify research concepts. Nonetheless, development of a common language lagged. Future research may thus focus on uncovering alternative communication strategies for board members with differing education levels, cognitive capacities and communication styles.

Limitations of this research include a focus on a single board whose structure and dynamics developed uniquely over time. Professional bonds between this study’s PI and I-CCB members may have led to more positive responses than usual during interviews. However, the PI did not know all participants who joined the board over time, making bias correction at recruitment unfeasible. We used data from two members who dropped out after the first follow-up and whose expectations were not confirmed by the second follow-up. We used these data alongside the data from other members because they revealed expectations, some of which were realized before the first follow-up interview. We also acknowledge that some partnership goals were steered by researchers, meetings were sometimes dominated by researchers, and there was profuse use of jargon during meetings. This result appears to be in contradiction with the fact that I-CCB members embodied overlapping identities and roles and need to be further explored in future research. Of particular interest will be to find out how expectations and constraints may relate to members’ initial position on the board. Despite limitations, the I-CCB diverse membership makes us confident that these findings are relevant to advisory boards of any size and other locations. Innovative strengths of our design include: three waves of interviews to capture short- and long-term accomplishments; the relatively large I-CCB; integration of data from researchers and community partners; and data triangulation.

**Implications for advisory boards**

Advisory board members whose anticipated contributions and returns are accomplished may be more motivated to remain involved. Retention of 80% of the I-CCB membership over 4 years suggests that participants managed most barriers and contributed to and gained from their involvement. By capitalizing on facilitators and addressing barriers, research partners can improve engagement, retention and participation in procedural and substantive aspects of research. I-CCB dynamics (italicized) can be used by other advisory boards: dialectic processes to help members blend scientific and indigenous knowledge and practice wisdom; mutual support to work together despite social/professional differences; and problem solving to achieve consensus. Having a Memorandum of Understanding in place can facilitate accomplishments by fostering trust. To help low-income partners, advisory boards may advocate for earmarked funding to help members facing financial difficulties. Advisory boards may choose to rotate facilitators so that all members can ‘run’ meetings. Jargon can be monitored so that non-academic members are always included.

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