Use of a Systematic Consultation Process to Facilitate Nursing Research Projects: An Exemplar

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Abstract

Purpose/Objectives: The purpose of this article is to describe the use of a well-established, five-stage consultation process, to advise a research team on planning strategies to engage domestic violence shelters (DVSs) as community partners in their study. The research team is testing a health promotion intervention for teens living in shelters with their parent and needed to enlist shelters as sites to recruit teens and conduct the intervention. Consultation aims were to (a) identify highly promising strategies described in peer-reviewed literature for identifying, recruiting, and collaborating with community organizations in research, and (b) identify DVSs that would potentially serve as effective community partners for the study.

Methods: A clinical nurse specialist (CNS) and a public health master's student led the consultation. The consultation process included (a) a systematic review of 29 peer-reviewed articles about research or program evaluation studies that engaged community partners, and (b) a comprehensive online search of information about DVSs.

Outcomes: Consultants identified 104 strategies used in studies to engage community partners and 10 specific DVSs most likely to effectively engage in the study.

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Conclusion: CNSs are well situated to provide consultation to research teams and should follow well-established consultation processes and systematic data collection procedures.

Introduction

Clinical nurse specialists (CNSs) have performed the critical role function of consultation since the inception of the CNS role[1] and continue to do so today.[2] The National Association of Clinical Nurse Specialists defines consultation as "patient, staff, or system-focused interaction between professionals in which the consultant is recognized as having specialized expertise and assists [the] consultee with problem solving."[3]

In recent years, several literature reviews of published articles describing the CNS role have been conducted.[4,5,6] In these reviews, the authors identify the consultation role as one of a number of key roles for CNSs both nationally and internationally. Lewandowski and Adamle,[4] in a literature review of 1,273 articles in which the CNS role was described, identified three types of consultation practiced by CNSs: (a) case consultation, (b) organizational consultation (e.g., facilitating communication, resolving conflict, introducing organizational changes), and (c) technology consultation (e.g., evaluating and introducing new technology). Jokiniemi and colleagues,[5] in their systematic review of 42 articles on the roles of the nurse consultant in the United Kingdom, the CNS in the United States, and the clinical nurse consultant in Australia, suggested that while the functions of these advanced practice nurses varied, their consultation activities included the following: (a) providing expert clinical advice, (b) facilitating problem-solving, (c) providing professional development, (d) guiding organizational development, and (e) being a resource person.[5] Hutchinson and colleagues, in a review of 50 articles, argued that the role function of consultation, in the broadest sense, emerged as a function for advanced practice nurses internationally.[6]

Despite that consultation is considered a critical role function of CNSs, there are few examples in the literature that outline in detail how they enact this role, especially outside of the clinical setting. For example, although Lewandowski and Adamle argue that CNSs contribute to research by working with study teams to generate study ideas, facilitate access to study populations, and help implement findings,[4] CNSs are not often provided real-world examples of how their consultation skills can be used to facilitate research projects.

Researchers at the University of Cincinnati College of Nursing encountered a specific problem for which they sought consultation. They are conducting a study of a 4-week teen health intervention called Time4U (T4U) to improve the health of teens who live in families experiencing interpersonal violence and are recruiting teen participants from area domestic violence shelters. Although the researchers have well-established relationships with two area shelters, they needed to engage additional shelters in order to recruit and enroll the number of teens needed to meet the study aims. To facilitate this process, they arranged for consultation with a team that included a CNS with expertise in the consultation process, including the use of systematic data collection procedures to answer pragmatic questions, and a master's student in public health with expertise in community engagement. The purpose of this article is to describe a systematic five-stage consultation process based on a

well-established consultation model used to advise the research team on planning strategies to engage new domestic violence shelters in the study. The consultation will be referred to throughout this article as the T4U consultation project.

Methods and Results

Consultation Process

The consultation was provided by the first author, who was completing a capstone project to obtain a master's degree in public health, and the last author, a PhD-prepared nurse scientist and an MSN-prepared CNS who served as the faculty mentor to the first author. The purpose of the master's capstone project was for the first author to learn how to employ a systematic consultation process to address a real-world problem encountered by healthcare professionals concerned with a public health issue – in this case, a research team developing an intervention to improve the health of teens who live in families experiencing domestic violence.

A systematic approach to consultation as described by Block[7] was used by the consultants. This approach consists of the following five steps: 1) entry and contracting, 2) discovery and dialogue, 3) analysis and the decision to act, 4) engagement and implementation, and 5) extension, recycle, or termination. The following sections will describe each step of the consultation process as it was carried out in the T4U consultation project.

Step 1: Entry and Contracting

In the first step identified by Block,[7] the consultant meets with the consultee about the project. The problem driving the project and the expectations of the consultee and the consultant are addressed. In the T4U consultation project, this step began with a request from the principal investigator of the research project. The consultants met with the T4U research team to determine the scope of the consultation, including whether the consultants would be responsible for the implementation (Step 4) of their recommendations. Because the principal investigator wanted to make personal contact with the domestic violence shelters, it was determined that the consultants would not be responsible for implementation. The consultants and the research team determined the purpose, aims, and deliverables of the consultation. The purpose of the consultation was to help the research team develop a plan to effectively engage new domestic violence shelters in the T4U research study. Engaging community-based organizations (CBOs) in research includes (a) identifying which organizations to approach, (b) recruiting them to partner in the research, and (c) collaborating with them in ways that enhance the success of the research. The consultation thus had the following specific aims:

> Aim 1: Identify strategies described in peer-reviewed literature that offer the most promise for identifying, recruiting, and collaborating with CBOs in research.

> Aim 2: Identify domestic violence shelters that would potentially serve as effective community partners for the T4U study.

These aims were approved in a meeting between the consultants and the principal investigator. Target deliverables with deadlines for completion were agreed upon. These

deliverables included (a) a list of strategies most likely to be effective in engaging additional domestic violence shelters in the T4U study and (b) a list of domestic violence shelters mostly likely to serve as effective community partners for the T4U study. These deliverables were due to the research team within three months of the start of the consultation process.

Step 2: Discovery and Dialogue

In the second step of the consultation process outlined by Block,[7] the consultant determines the methods to guide the consultation, collects and analyzes relevant data, and sets a timeframe for the consultation. In the T4U consultation project, the consultants conducted a systematic literature review to meet Aim 1 and did a comprehensive online search for information on domestic violence shelters for Aim 2.

Aim 1.—The consultants searched the literature for peer-reviewed articles that reported on research or program evaluation studies (hereafter referred to as "projects") that had included a CBO in some aspect of the study. Scopus, the largest database of abstracts and peer-reviewed literature, was searched. Search terms included a combination of the following: "community partners," "community partnerships," "academic-community," "community-academic," "engagement," "identification," "outreach," "recruitment," "participant recruitment," "recruitment sites," and "sites." Articles were included in the review if (a) the abstract explicitly or implicitly referenced a CBO that was involved in the project, (b) the project took place in the United States, and (c) the article was written in English. The search initially yielded 59 articles, which the consultants examined. The final review included 29 articles that met the three criteria and were available through the University of Cincinnati web portal or Google Scholar free of charge. Table 1 displays the citations of the articles included in the review.

The consultants then developed a series of data display tables to extract information related to CBO engagement strategies mentioned in any section (e.g., introductions, methods, results, discussion) of the 29 articles. The first data display table organized the following information about each article: (a) author, (b) title, (c) partnership between the project team and the CBO (yes/no), (d) purpose of the partnership, (e) extent of the partnership, (f) how the partnership began, (g) number of CBOs involved in the project, and (h) target population. The consultants assessed the extent of the partnerships to be (a) unknown (i.e. the article lacked detail or had only had a passing reference to a CBO), (b) limited (i.e. CBOs only provided access to participants and were not engaged in other aspects of the project), (c) moderate (i.e. CBOs advised the project team but did not make research or program-related decisions), and (d) extensive (i.e. CBOs were engaged in the project design, data collection, program implementation, data analysis, and/or evaluation). Articles that described at least a limited involvement by a CBO were included in the data set. Table 2 displays examples of the information extracted from the articles related to the partnerships between project teams and the CBOs.

Next, each consultant independently read five articles to obtain an overall sense of how project teams engaged with the CBOs, specifically attending to how their partnerships

began. Based on these impressions, they constructed a list of key terms that described the variety of types of engagements described in the articles. Table 3 displays these terms.

The consultants then independently read all 29 articles, extracted sentences or paragraphs that included one or more of the key terms, and summarized extracted text in a phrase that succinctly identified an engagement strategy used by a project team to engage a CBO. They then placed these phrases on a second data display and grouped similar strategies. Table 4 provides examples of strategies that were all related to leveraging existing community partners to help recruit new partners.

The consultants compared the tables they had each constructed and through discussion and consensus completed a final data display table by removing duplicate strategies, adding a column to record the total number of articles that referenced each strategy, and grouping the strategies into identification, recruitment, or collaboration categories. This process yielded 18 identification strategies, 53 recruitment strategies, and 29 collaboration strategies. Examples of identification strategies include: (a) asking university colleagues for names of CBOs who are working or have worked with the university in the past; (b) leveraging the network of current CBO partners by asking them who they know at other CBOs, obtaining their recommendations on who to approach, or asking them to contact members of their professional membership organizations; and (c) finding an umbrella association (i.e. coalition, center, regional or national organization) that can recommend CBOs. Examples of recruitment strategies include: (a) developing a formal presentation and a recruitment packet to introduce the project, (b) demonstrating how the project aligns with the CBO's mission by emphasizing shared values and goals, and (c) defining and highlighting the key motivating factors (benefits) for CBO involvement in the study. Examples of collaboration strategies include: (a) developing a clear and concise orientation to the project for CBO personnel involved in the project (this could include a presentation or training on research), (b) being flexible to meet CBO needs (for example, adjust project task timelines to accommodate conflicting CBO priorities or offer flexible engagement levels), and (c) eliciting feedback on the project from CBO partners. Table 5 provides the number of articles in which each of the example strategies was cited and the corresponding author citation.

To provide the researchers with a starting point for engaging CBOs, the consultants focused on the applicability of the 18 identification strategies to the T4U project. The consultants independently rated each of the 18 identification strategies on five-point Likert scales (1-low to 5-high) related to (a) the strategy's relevance to the needs of the T4U study, (b) its ease of use, and (c) the likelihood it would be used in the T4U project. For example, the strategy of leveraging current partners was rated to be applicable to the T4U project because: (a) the project team had strong partnerships with agencies who had close relationships with other shelters (high relevance), (b) the team was in constant contact with current partners and could easily request introductions to directors of other shelters (high ease of use), and (c) the potential for success was high with little expenditure time (high likelihood of use). In contrast, the strategy of publishing stories or information about the program that CBOs might see and self-refer to participate was rated to have little applicability to the T4U project because: (a) the project team needed to enlist a number of new partners as quickly as possible (low relevance), (b) captivating stories would need to be created, appropriate venues

for publication would need to be identified, and new shelters would need to read the stories and self-refer (low ease of use), and (c) the potential for success of this generalized approach was low with significant expenditure of time (low likelihood of use).

Overall scores were calculated for each strategy by summing the three ratings. The consultants then compared and averaged their ratings for each strategy. For each strategy with a score of 12 or higher (out of 15), the consultants developed specific recommendations for how the T4U study researchers might use the strategy for their purposes. Table 6 displays examples of the identification strategies and the consultants' applicability rating for each strategy.

Aim 2.—The consultants next systematically gathered online information about domestic violence shelters that might potentially serve as community partners for the study. The literature review had revealed that an important identification strategy was finding CBOs that are in geographical proximity to the project team. Therefore, by conducting online searches, consulting the U.S. Census Bureau's 2015 American Community Survey statistics, [8] and using Google maps, the consultants created a list of all domestic violence shelters that were located within 200 driving miles of one of the study investigators as the study budget would accommodate required staff travel within this radius.

A data display table was constructed in which each of the 107 shelters comprised a row and information about the shelter, when available on online, was listed in columns with the following headings: (1) name of shelter, (2) state and county of location, (3) address, (4) distance from study investigators, (5) phone number, (6) extent of web presence, (7) county/catchment area incidence rate of domestic violence, (8) county/catchment area total population, (9) county/catchment area population ages 10–19, (10) people sheltered annually, (11) teen programs, (12) level of agency funding, (13) agency structure (i.e. Board of Directors, shelter part of larger organization), (14) agency executive director, and (15) other relevant contacts (i.e. shelter manager). The amount of information that was available online for each shelter varied considerably. A link to the shelter website was embedded in the cell listing the shelter name for easy access, and contact information for the executive directors and other relevant personnel was included when available.

The consultants rated the web presence of the shelters as a proxy for the resource level of the shelter and its capacity to host a research project. Since CBOs frequently struggle with lack of sufficient resources to meet the fundamental goals of the organization, web presence was selected as a proxy based on the knowledge that website development is costly in terms of time, design expertise, technology expertise, and money. Thus, the consultants determined whether there was (a) limited web presence (i.e. no website or website with only basic information), (b) moderate web presence (i.e. website with some relevant information but lacking details about the agency), or (c) robust web presence (website with comprehensive information about the agency).

The column for teen programs was used to identify shelters, or parent agencies, that had a focus on teens and therefore a service orientation consistent with the aims of the research

study. The columns for number of people sheltered was based on the number of clients housed each year and/or the number of beds in each shelter.

The consultants then narrowed the list of shelters based on several factors. Shelters were chosen that were less than 100 miles from one of the study investigators, served children and adolescents, and were in a county/catchment area with a population of persons ages 10 to 19 of at least 12,000. Organizations that included more than one shelter were included on the list as well. Through this process, 10 shelters were identified as most the likely to serve as effective community partners for the T4U study.

Step 3: Analysis and Decision to Act

According to Block,[7] in this step the consultant provides findings and recommendations to the consultee and assists the consultee in deciding which of the consultation recommendations to adopt, who will be accountable for carrying out the recommendations, and in what timeframe the recommendations will be implemented. In the T4U consultation project, the consultants presented their findings to the T4U research team at a regularly scheduled team meeting. The consultants outlined their process for addressing the aims as well as the main results in a PowerPoint presentation and provided a letter to the research team summarizing this information. Handouts were given to the research team that included the following: (a) the full list of 107 strategies for engaging CBOs in research projects; (b) a list of 10 domestic violence shelters recommended for partnership and their contact information; and (c) a list of the recommended umbrella organizations, specifically the statewide coalitions for domestic violence, with their contact information.

The consultants then guided the research team in using their findings to decide which strategies to prioritize and which recommendations to follow. To begin the process of guiding the research team, the consultants asked the team to review the handout on which they presented the applicability ratings of the identification strategies. The consultants asked each research team member to talk about their thoughts about the applicability of each of the 18 identification strategies. At the end of this group discussion, the consultants and the research team agreed that the team should initially focus on the following three strategies: (1) have current domestic violence shelter partners facilitate introductions between the research team and potential new shelter partners; (2) contact an umbrella association (i.e. statewide coalitions for domestic violence) for assistance approaching new shelters; and (3) contact shelters from the list with characteristics that meet the objectives of the research project. For the first adopted strategy, the consultants then asked the group to decide which team member would reach out to the key contact person at their current shelter partners and to agree upon a deadline date for making the contact. The consultants followed a similar process for the other two strategies.

At the end of the meeting, the consultant distributed an evaluation form so that the research team could provide feedback on the consultation presentation. The feedback indicated that the consultation was highly effective in helping the research team create an action plan to engage new community partners.

Step 4: Engagement and Implementation

According to Block,[7] Step 4 consists of the consultant, consultee, or both implementing the action plan decided on in Step 3. In the T4U consultation project, it was agreed that implementation would be the responsibility of the research team.

The research team is now implementing strategies identified in Step 3 by contacting the executive directors or designees at the domestic violence shelters with whom the research team is currently partnering, contacting the 10 local domestic violence agencies identified by the consultants, and creating introductory materials about the research project. To date, strategies recommended to the project team yielded the addition of four new shelter sites and the creation of an infographic and introductory video highlighting the study aims and procedures for potential CBO partners.

As the engagement process evolves, the research team will utilize additional strategies recommended by the consultants. For example, once new domestic violence shelters have joined the project, the team will review the collaboration strategies identified by the consultants and implement strategies deemed most relevant to that specific partnership.

Step 5: Extension, Recycle, or Termination

Block[7] indicates that in the final step, the consultee and the consultants agree upon future consultation needs. These needs can include an extension of the consultation process (i.e. expanding the project beyond its initial scope), a recycle of the process (i.e. starting the process again if the problem became more defined in the implementation stage), or a termination of the process (i.e. ending of the consulting relationship if implementation was either extremely successful or a moderate-to-high failure). In the T4U consultation project, the research team and the consultants decided that the consultation relationship could be terminated because the goals of the project had been well met. The research team members are currently implementing three of the identification and recruitment strategies identified by the consultants. They believe a wide variety of collaboration strategies identified by the consultant will serve the team well as they continue to engage additional domestic violence shelters in the research project.

DISCUSSION

The T4U consultation project demonstrated that CNSs have a unique role as consultants to research teams. Because consultation has long been an integral role of CNSs' practice, they are particularly well suited to provide consultation services such as those described here. While CNSs often provide consultation in practice settings, these skills were translated to the research arena in this project.

Block[7] provided a clearly defined multistep process by which the T4U consultants accomplished consultation aims in a systematic manner. The research team concluded that the consultation was particularly effective due to (a) a mutual goal-setting process delineated in a written contract between the consultants and the consultee, (b) a clear demarcation of the roles and responsibilities of the consultants and the consultee, (c) the systematic procedures used to collect and analyze data, and (d) the relevant and comprehensive

information the consultants presented to the research team both through dialogue in a team meeting and through written materials.

The process discussed in this article can serve as an exemplar for CNSs who provide consultation to research teams. In particular, the systematic procedures used to gather and interpret information can be replicated or modified to guide consultants in gathering information needed to help research teams address specific pragmatic challenges. For example, a research team might wish to develop a dissemination plan to broadly share their findings throughout a community involved in their study. A literature review similar to the one conducted by the T4U consultants, but one that extracts and summarizes information from published articles on community dissemination practices, would aid the research team in conducting this phase of their study in a deliberate rather than haphazard manner. Similarly, a research team might wish to partner with home health agencies that serve a particular population and are in close proximity to a major health facility. The online search procedures and rating systems used by the T4U consultants to compile of list of prioritized domestic violence shelters could be modified by consultants to provide a similar list of home health agencies with specific characteristics identified by the research team. The data display tables developed by the T4U consultants for both Aims 1 and 2 can be modified according to the specific questions posed by consultees as the tables provide useful ways to aggregate large amounts of information and compile relevant findings.

While research teams regularly make decisions such as deciding what CBOs to approach for their studies, the consultation process described here allows for these decisions to be made in a more strategic, and thus more effective, manner. The T4U research team concluded that the consultants' recommendations, based on a thorough and painstaking gathering and synthesizing of relevant information, provided the foundation for a CBO engagement plan that is intentional and tactical rather than a "best guess" about what domestic violence shelters to approach. CNSs can thus call on consultation skills that are integral to their roles and assist with projects that advance knowledge and positively impact health.

Acknowledgement:

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Table 1:

Articles Included in the Review

Authors	Title	Year	Journal Information
Barrera D.	Examining our interdependence: Community partners' motivations to participate in academic outreach	2015	*Journal of Higher Education Outreach and Engagement.* 19(4):85–114.
Chadiha LA, Washington OGM, Lichtenberg PA, Green CR, Daniels KL, Jackson JS.	Building a registry of research volunteers among older urban African Americans: Recruitment processes and outcomes from a community-based partnership	2011	*Gerontologist.* 51(SUPPL. 1):S106-S115.
Davis MM, Aromaa S, McGinnis PB, et al.	Engaging the underserved: A process model to mobilize rural community health coalitions as partners in translational research	2014	*Clinical and Translational Science.* 7(4):300–306.
Flores G, Walker C, Lin H, et al.	An innovative methodological approach to building successful community partnerships for improving insurance coverage, health, and health care in high-risk communities	2017	*Progress in Community Health Partnerships: Research, Education, and Action.* 11(2):203–213.
Hilgendorf A, Stedman J, Inzeo PT, et al.	Lessons from a pilot community-driven approach for obesity prevention	2016	*Wisconsin Medical Journal.* 115(5):275–279.
Irons TG, Gustke SS, Lynch DC, Shelton S, Speer AJ.	Partnerships between Academic Health Centers and Area Health Education Centers in developing community-based ambulatory education networks in North Carolina and Texas	1999	*Education for Health.* 12(3):289–298.
Jameson JP, Shrestha S, Escamilla M, et al.	Establishing community partnerships to support late-life anxiety research: Lessons learned from the calmer life project	2012	*Aging & Mental Health.* 16(7):874–883.
Katigbak C, Foley M, Robert L, Hutchinson MK.	Experiences and Lessons Learned in Using Community-Based Participatory Research to Recruit Asian American Immigrant Research Participants	2016	*Journal of Nursing Scholarship.* 48(2):210–218.
Kogan JN, Bauer MS, Dennehy EB, et al.	Increasing minority research participation through collaboration with community outpatient clinics: The STEP-BD Community Partners Experience	2009	*Clinical Trials.* 6(4):344–354.
Larkey LK, Gonzalez JA, Mar LE, Glantz N.	Latina recruitment for cancer prevention education via Community Based Participatory Research strategies	2009	*Contemporary Clinical Trials.* 30(1):47–54.
Lees A.	Roles of Urban Indigenous Community Members in Collaborative Field-Based Teacher Preparation	2016	*Journal of Teacher Education.* 67(5):363–378.
Lesser J, Verdugo RL, Koniak-Griffin D, Tello J, Kappos B, Cumberland WG.	Respecting and Protecting our Relationships: a Community Research HIV Prevention Program for Teen Fathers and Mothers	2005	*AIDS Education & Prevention.* 17(4):347–360.
Mehta P, Brown A, Chung B, et al.	Community partners in care: 6-month outcomes of two quality improvement depression care interventions in male participants	2017	*Ethnicity and Disease.* 27(3):223–232.
Moreno G, Mangione CM, Meza CE, et al.	Perceptions from Latino and African American older adults about biological markers in research	2015	*Ethnicity and Disease.* 25(3):355–362.
Ntiri DW, Stewart M.	Recruitment challenges: Lessons from senior centers and older African-American participants in a literacy study	2010	*Educational Gerontology.* 36(2):148–154.
Oberg De La Garza T, Moreno Kuri L.	Building Strong Community Partnerships: Equal Voice and Mutual Benefits	2014	*Journal of Latinos & Education.* 13(2):120–133.

Authors	Title	Year	Journal Information
Panapasa S, Jackson J, Caldwell C, et al.	Community-based participatory research approach to evidence-based research: Lessons from the Pacific Islander American health study	2012	*Progress in Community Health Partnerships: Research, Education, and Action.* 6(1):53–58.
Parker EA, Israel BA, Williams M, et al.	Community Action Against Asthma	2003	*JGIM: Journal of General Internal Medicine.* 18(7): 558–567.
Pinto B, Waldemore M, Rosen R.	A Community-Based Partnership to Promote Exercise Among Cancer Survivors: Lessons Learned	2015	*International Journal of Behavioral Medicine.* 22(3): 328–335.
Poole J, Rife JC, Pearson F, Moore WR.	Developing Community Partnerships With Religiously Affiliated Organizations to Address Aging Needs: A Case Study of the Congregational Social Work Education Initiative	2009	*Social Work & Christianity.* 36(2):176–191.
Rapkin BD, Massie MJ, Jansky EJ, Lounsbury DW, Murphy PD, Powell S.	Developing a Partnership Model for Cancer Screening with Community-Based Organizations: The ACCESS Breast Cancer Education and Outreach Project	2006	*American Journal of Community Psychology.* 38(3): 153–164.
Rhodes SD, Alonzo J, Mann L, et al.	Enhancement of a Locally Developed HIV Prevention Intervention for Hispanic/Latino MSM: A Partnership of Community-Based Organizations, a University, and the Centers for Disease Control and Prevention	2015	*AIDS Education & Prevention.* 27(4):312–332.
Rogge ME, Rocha CJ.	University-Community Partnership Centers: An Important Link for Social Work Education	2004	*Journal of Community Practice.* 12(3):103–121.
Salinas R, Chabrán R.	Preparing Ethnic Non-Profits for the 21st Century	2005	*Resource Sharing & Information Networks.* 18(1): 121–126.
Santoyo-Olsson J, Cabrera J, Freyre R, et al.	An innovative multiphased strategy to recruit underserved adults into a randomized trial of a community-based diabetes risk reduction program	2011	*Gerontologist.* 51(SUPPL. 1):S82-S93.
Stephenson PL, Green BF, Wallace RL, Earl MF, Orick JT, Taylor MV.	Community partnerships for health information training: medical librarians working with health-care professionals and consumers in Tennessee	2004	*Health Information & Libraries Journal.* 21:20–26.
Wagner JL, Brooks B, Smith G, et al.	Determining patient needs: A partnership with South Carolina Advocates for Epilepsy (SAFE)	2015	*Epilepsy and Behavior.* 51: 294–299.
Ward DS, Vaughn AE, Burney RV, Østbye T.	Recruitment of family child care homes for an obesity prevention intervention study	2016	*Contemporary Clinical Trials Communications.* 3: 131–138.
Whitewater S, Reinschmidt KM, Kahn C, Attakai A, Teufel-Shone NI.	Flexible roles for American Indian elders in community-based participatory research	2016	*Preventing Chronic Disease.* 13(6).

Table 2:

Information Extracted Related to Partnerships between Project Teams and Community-Based Organizations (CBOs)

Authors	Title	Partnership with a CBO	Purpose of partnership	How partnership began	Number of CBOs involved	Target population	Extent of partnership
Barrera, D	Examining our interdependence: Community partners' motivations to participate in academic outreach	Yes	college pipeline program	prior relationship	50	low socio-economic status, youth	extensive
Chadiha LA, Washington OGM, Lichtenberg PA, Green CR, Daniels KL, Jackson JS	Building a registry of research volunteers among older urban African Americans: Recruitment processes and outcomes from a community-based partnership	Yes	health promotion; study participant recruitment	unknown	many, unquantified	low socio-economic status, minority, elderly	moderate
Davis MM, Aromaa S, McGinnis PB, et al.	Engaging the underserved: A process model to mobilize rural community health coalitions as partners in translational research	Yes	community-based participatory research	prior relationship	4+	rural	extensive
Flores G, Walker C, Lin H, et al.	An innovative methodological approach to building successful community partnerships for improving insurance coverage, health, and health care in high-risk communities	Yes	study participant recruitment	cold contact, snowball referrals	97	low socio-economic status, urban, minority	limited
...	...	...	...	...	...	...	...

Table 3:

Key Terms Describing How Project Teams Engage with Community-Based Organizations

Advise/Advisory
Benefits
Burden
Collaborate/Collaboration
Communicate/Communication
Commit/Commitment
Connect
Engage/Engagement
Explain/Orient/Present(ation)/Train
Feedback
Follow-up
Gatekeepers/Leaders
Goals/Outcomes/Mission
Identify
Incentives/Compensation
Interaction
Introduce/Introductory
Invite
Involve/Involvement
Meeting(s)
Motivate
Participate
Recruit/Recruitment
Refer
Relationship
Share
Support
Target
Trust
Visit(s)

Table 4:

Strategies Used by Project Teams to Leverage Existing Partners to Facilitate Engagement of New Partners

Source Article	Strategy
Barrera	Determine how potential partners are related to each other.
…	…
Davis et al.	Build on existing relationships.
…	…
Flores et al.	Ask contacts who know potential partners to provide an introduction.
Flores et al.	Ask current partners to recommend and refer potential partners.
…	…
Hilgendorf et al.	Have current partners reach out to potential partners.
…	…
Jameson et al.	Ask current partners to identify new potential partners.
…	…
Katigbak et al.	Involve current partners in identifying and recruiting new partners.
…	…
Larkey et al.	Ask current partners to use their networks to identify and recommend potential partners.
Larkey et al.	Determine who current partners know at other potential sites.
…	…
Lees	Determine possible relationships research team and/or current partners have with potential partners.
…	…
Parker et al.	Ask current partners to recommend other potential partners.
…	…
Rapkin et al.	Ask current partners for referrals to other organizations in their network.
…	…
Santoyo-Olsson et al.	Use a snowball approach by asking current partners to identify potential partners.
…	…

Table 5:

Example Strategies and Sources of the Strategies

	Strategy	# Source Articles	Source Articles
Identification	Ask colleagues for names of CBOs who are working or have worked with the university in the past.	2	Ntiri et al. Parker et al.
	Leverage the network of current partners by asking them who they know at other CBOs, obtaining their recommendations on who to approach, or asking them to contact members of their professional membership organizations.	11	Barrera Davis et al. Flores et al. Hilgendorf et al. Jameson et al. Katigbak et al. Larkey et al. Lees Parker et al. Rapkin et al. Santoyo-Olsson et al.
	Find an umbrella association (i.e. coalition, center, regional or national organization) that can recommend CBOs.	4	Davis et al. Rapkin et al. Rogge et al. Santoyo-Olsson et al.
Recruitment	Develop a formal presentation and a recruitment packet to introduce the project.	10	Jameson et al. Larkey et al. Moreno et al. Oberg de la Garza et al. Pinto et al. Rapkin et al. Salinas et al. Santoyo-Olsson et al. Stephenson et al. Ward et al.
	Demonstrate how the project aligns with the CBO's mission by emphasizing shared values and goals.	9	Barrera Irons et al. Katigbak et al. Kogan et al. Pinto et al. Rapkin et al. Rogge et al. Wagner et al. Ward et al.
	Define and highlight the key motivating factors (benefits) for CBO involvement in study.	5	Chadiha et al. Jameson et al. Pinto et al. Stephenson et al. Ward et al.
Collaboration	Develop a clear and concise orientation to the project for CBO personnel involved in the project (this could include a presentation or training on research).	5	Chadiha et al. Davis et al. Flores et al. Rapkin et al. Ward et al.
	Be flexible to meet CBO needs (for example, adjust project task timelines to accommodate conflicting CBO priorities or offer flexible engagement levels).	6	Katigbak et al. Pinto et al. Rapkin et al. Rogge et al. Ward et al. Whitewater et al.
	Elicit feedback on the project from CBO partners.	5	Kogan et al. Larkey et al. Mehta et al. Parker et al. Pinto et al.

CBO = Community-Based Organization

Table 6:

Identification Strategies and Consultants' Average Applicability Ratings Using a Likert Scale (1-Low To 5-High)

Strategy	Relevance	Ease of use	Likelihood of use	Total
1. Identify CBOs in close proximity to the research team.	4	4.5	4.5	13
2. Identify CBOs in communities with a high concentration of the target population.	4.5	3	5	12.5
3. Identify professional or personal relationships, including those of colleagues, with CBOs or the communities where the CBOs exist.	5	3.5	5	13.5
4. Ask colleagues for names of CBOs who are working or have worked with the university in the past.	3	4	2.5	9.5
5. Leverage the network of current partners. This can include asking partners who they know at other CBOs, their recommendations on who to approach, or tapping into their professional membership organizations.	5	4.5	5	14.5
6. Find an umbrella association (i.e. coalition, center, regional or national organization) that can recommend CBOs.	5	4	3.5	12.5
7. Attend in-person events such as trainings, business meetings, or conferences attended by CBOs to make contacts.	4	2.5	2.5	9
8. Meet with key leaders and gatekeepers in target community to identify CBOs.	3.5	2	2.5	8
9. Create a list of potential CBO partners from online, publicly available information.	5	4	5	14
10. Publish stories or information about the program that CBOs might see and self-refer to participate. Information could be distributed via an association listserv, for example.	2.5	2	2	6.5
11. Form a community advisory board that can help guide and facilitate CBO identification and engagement.	3	2	2	7
12. Find a community leader or influential organization that can endorse the project and serve as a project champion and liaison to other CBOs.	4.5	2.5	3	10
13. Ask an umbrella association (i.e. coalition, center, regional or national organization) for assistance approaching new CBO.	5	3.5	3.5	12
14. Have current partners facilitate introductions between the research team and other CBOs.	5	5	5	15
15. Have current partners help with recruitment by having them reach out to other CBOs first. One method for facilitating this strategy is to create an email template for them emphasizing the benefits of participation and their endorsement.	5	3.5	3.5	12
16. Email/Mail invitations to participate to CBOs.	4	5	2	11
17. Follow up written invitations to participate with a phone call to the CBO.	4	4.5	3	11.5
18. Hold an initial event and invite potential and current partners CBOs to attend (i.e. "world café", informational meeting, kickoff event, focus group).	5	3	4	12

CBO = Community-Based Organization