Community Engagement Strategies in the Original and Renewal Applications for CTSA Grant Funding

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Abstract

Purpose: The Clinical and Translational Science Award (CTSA) program has highlighted community engagement in research by requiring institutions to develop bidirectional relationships with communities to obtain funding. Little is known about how institutions have operationalized that requirement. This study aimed to describe the strategies proposed by the first institutions to receive CTSA funding and to undergo the CTSA renewal process.

Methods: The authors conducted a qualitative document analysis of the community engagement section of 12 original and 10 renewal grant applications of the 12 institutions awarded CTSA funding in 2006 and renewed in 2010.

Results: Institutions employed capacity-building and research engagement strategies. Capacity-building strategies included education, pilot grants, connecting potential partners, and community research centers. Research engagement strategies ranged from those that allowed for very little input from communities, such as announcements, to those that allowed for a high amount of input from communities, such as community-researcher teams.

Conclusion: CTSA funding has supported capacity-building for institutions and communities to partner. Engagement strategies employed by the institutions are largely known from prior community-engaged research. Based on the grants from these institutions, the CTSA funding has largely enabled institutions to develop capacity to engage. Clin Trans Sci 2014; Volume 7: 38–43

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Introduction

Evidence shows that many research advances fail to be adequately disseminated and implemented.[1,2] One reason cited is because research projects and institutions lack community engagement strategies.[3,4] Increasingly, researchers, the Institute of Medicine, and others have called for more engagement of communities in research.[4–8] The National Institutes of Health (NIH) responded by including community engagement as a key function of the Clinical and Translational Science Award (CTSA) program, an initiative to change the structure of medical research and training, and to increase the rate of innovation and translation of research.[9]

The CTSA program provided funded institutions with millions of dollars to support their research infrastructure and, in turn, required these institutions to have several cores, one of which related to community engagement. Specifically, funded institutions were required to foster long-term bidirectional relationships between the CTSA institution and the community for their mutual benefit,[10] but little is known about how grantees accomplished this vision. One commentary from leaders at the NIH[11] notes the progress of community engagement within the CTSAs, and three studies[12–14] report single site experiences. Overall, findings indicate that these individual sites have found some success engaging their communities through a variety of strategies, including pilot grants, community-researcher conferences, and community-based participatory research projects. Although these studies are helpful, we lack a multisite examination of the CTSA grantees to understand more broadly which strategies were used to accomplish the mission of engaging with communities.

Accordingly, this study sought to describe the strategies employed by the set of institutions that were both awarded CTSA funding when the initiative began in 2006 and whose funding was renewed in 2010. We examined the strategies for increasing community engagement and the changes in approaches made between 2006 and 2010. Findings from this study can be useful in understanding the scope of community engagement strategies generated by the CTSA program and identifying specific areas in which the CTSA process resulted in innovative engagement strategies. As the CTSA represents one of the best funded community engagement initiatives in biomedical research, results can help institutions and policymakers understand the potential leverage such NIH funding mechanisms for community engagement may have on the national goal to improve translation of scientific research into improved practice and policy in communities and health and human service settings.

Methods

Study design and sample

This study was a qualitative document analysis of the community engagement section of CTSA grant applications, conducted in 2011. The sample comprised all 12 institutions first awarded CTSA funding in 2006, which were the only institutions that had undertaken both the original application and a renewal at the time of data collection. For each, we requested the community engagement sections of both the original and renewal applications. For the analysis, we obtained all 12 of the original applications, which were publicly available, and 10 (83%) of the renewals, which were provided by the principal investigator at each institution. Original applications were analyzed as a set, as were renewals. Where both were available, original and renewal applications for an institution were compared to identify changes in community engagement strategies across time. The study was deemed Not Human Subjects Research by the Johns Hopkins School of Public Health IRB, where the data collection and analysis were conducted.

Data analysis

All of the grants were analyzed using Atlas.ti 6.2.27. A start list of codes was developed that reflected community engagement

strategies found in the literature.[15–17] The primary coder (J.H.) reviewed all grants once and on second review applied the preliminary codes. Additional codes were developed inductively during the second grant review process,[18,19] after which J.H. reviewed the codebook for overlap between codes. A research assistant with qualitative methods training reviewed a subset of grants ($n = 5$; three original and two renewal) to verify the completeness and systematic application of codes. Discrepancies between the coders were identified and addressed through negotiated consensus[18] to ensure explicit definitions and consistent coding. J.H. applied the final codes ($n = 29$) to all grants during a third review. Coding was considered complete when after reviewing a set of grants both coders agreed that the codes were comprehensive and disconfirming examples were no longer evident.

Results

We identified two distinct types of engagement strategies within the CTSA grantee institutions: (1) capacity-building strategies and (2) research engagement strategies. Capacity-building strategies were efforts to prepare faculty and the staff of the institution for community engagement and prepare community members for such partnering around research. In contrast, research engagement strategies were efforts to develop and implement engagement strategies for specific research projects.

Primary strategies for capacity building included (1) providing education to faculty, staff, and students within the institution and to community partners; (2) funding pilot grants for early-stage relationship building between researchers and community members, (3) convening potential community partners, and (4) establishing community research centers (CRCs) funded by the CTSA and located within communities.

Strategies for research engagement included (1) announcements and advertisements pertaining to research at the institution; (2) participating in practice-based research networks (PBRNs) with physicians; (3) involving community member on boards, such as community-advisory boards and expert panels; (4) soliciting feedback; (5) hiring community members; (6) having community members as consultants; and (7) involving community members as co-investigators. Strategies varied in the degree to which they enabled community input in the research: from very little input to achieving full collaboration on community-based participatory research projects.[20]

Capacity-building strategies

Education and training

Institutions described in grant proposals plans both to educate external communities, such as community-based organizations, and internal constituents such as staff, faculty, and students. Education and training sometimes targeted multiple types of communities at the same time, and other times targeted a particular community, such as institutional faculty or a local community-based organization. Institutions employed community education events ($n = 12$), community engagement curriculum in programs of study ($n = 9$), workshops ($n = 8$), internships ($n = 4$), and traineeships ($n = 1$). The institutions needed to train both institutionally affiliated and nonaffiliated partners in the processes of community engagement, and to train community members in research principles and methods (Table 1).

Pilot grant funding for proposed community engagement

In the original applications, three institutions mentioned pilot funding for community engagement. By the renewal, the 10 institutions whose data were available all had pilot grants to support community engagement (Table 1). The grants were intended to facilitate the development of partnerships and to incentivize engaged research that would be eligible for other funding. Their purpose was to support the preliminary relationship-building stages that allow for community members and researchers to identify research interests and questions that would be appropriate for research grant funding, and to serve as a base for future research applications.

Inventorying and convening communities and researchers for partnerships

Institutions established mechanisms for researchers and community members to identify one another and begin the relationship-building necessary to conduct community engagement. Strategies included: a consultation service ($n = 12$), a community liaison ($n = 11$), and creating a public or institution-wide list of partners ($n = 3$).

The consultation services varied in composition among institutions. In some cases, they were composed of several liaisons, while in others, consultation services provided input from individuals who were not official liaisons, but who were willing to use their personal relationships to facilitate connections. One institution's consultation service targeted their PBRN, providing consultation on research methods and ongoing research for the physicians in the PBRN (Table 1).

Community liaisons provided personal connections between researchers and community members with whom the liaison had experience. As one institution noted in a renewal application, the liaison followed the research to completion, acting as a bridge between the researchers and the community, and helping to disseminate research findings to the community (Table 1).

CRC

CRCs provided community groups and researchers with resources such as meeting space, libraries, and institutional networks in a location physically in the community and funded by the institution. In their applications, institutions described these spaces as communal, shared by the institution and communities, with open access and availability of resources, such as meeting space and computers, which communities might find valuable, and which might also facilitate research engagement. Two institutions mentioned such plans in their original application. In the renewals, one institution maintained their center, but the other institution did not share their renewal application, so the status of their CRC is unknown. A third institution delineated new plans for a CRC in their renewal application.

Research engagement strategies

No community input

No community input strategies for community engagement were those strategies that were intended as one-way communication from the institution to the community, and did not offer the opportunity for community partners or members to respond. These were primarily announcements and notifications, which involved the institutions sharing information with the relevant communities. All institutions ($n = 12$) described plans for

Capacity building	
Education and training	Academic capacity building: *"To enhance the capacity of academic investigators to conduct research collaboratively with stakeholders from community-based organizations, we have also developed workshops on community engagement for academic investigators, staff, and community partners."* #8[‡]
	Community capacity building: *"Central to having effective community-partnered research projects is building the capacity of our community partners to engage in and use community research. The <Program> has provided training for our community partners in research design, data collection and analysis, and scientific and policy report writing"* #12
Pilot grant funding	*"At least six planning grants of $50,000 each will be awarded in the final year of the current CTSI funding cycle (FY5) through a competitive process. Successful planning grants, of 6–12 months duration, will support a community-engaged process."* #7
Resources for connecting	Consultation service: *"The <Site> PBRN consultation service will help researchers and practitioners evaluate ongoing studies, assess performance and fatigue of practices, evaluate the overall portfolio to ensure both diversity and focus on [quality improvement] and [cost effectiveness] studies, and assess impact of studies on the <Site> community."* #10
	Community liaison: *"For studies of potentially great importance or high impact in the local community, a specific member of the <Site CAB> will serve as a liaison throughout the life of the study to particularly assist in the project's dissemination efforts."* #6
Research engagement	
Some input	PBRN: *"Practice-based research networks have been formed to provide "real-world conditions" for research evaluating the benefits of seemingly successful preventive interventions, diagnostic procedures, and therapies initially tested in more highly controlled environments."* #6
Considerable input	Community members on boards, CABs: *"The Community Advisory Board (CAB), with broad community representation, will provide oversight of the activities of the community engagement core of the <CTSA>, and community input into research priorities, design and implementation strategies for research performed in the <CTSA>.*#8
	Community members on boards, Expert Panel: *"The <Site> has formed this group, comprised of nine leading academic institutions from throughout the nation, to address best practices, tools, curricula and innovative strategies regarding outreach, care and recruitment of underrepresented populations in clinical research."* #3
	Feedback: *"…we have begun conducting surveys and focus groups to determine community attitudes toward research, potential research priorities, and community needs. This provides excellent baseline data in a qualitative and semiquantitative format. We will repeat these surveys and focus groups on at least a semiannual basis to evaluate both specific <Site> outreach activities and changes in attitudes and needs in general."* #3
High input	Community-researcher teams, hiring community members: *"This success was attributed to hiring and training 32 community residents to collect the data, providing a community-engaged process that was scientifically rigorous, efficient, and action-oriented."* #12
	Community-researcher teams, community co-investigator: *"Ideally, our community participants are active partners—in the formulation of research questions; selection of methods; and analysis, interpretation, and application and dissemination of our findings. Such partnerships need to be sustained over time and must be predicated on the values of respect, trust, mutuality of interests, reciprocity, collective benefit, and long-term commitment."* #6
Comparison from original to renewal	
Pilot funding for engagement	*"As previously discussed, truly community-engaged research was rare at <Site> before formation of the CTSA. The Community Engagement Program has provided financial support to investigator and community groups to build their capacity to conduct such research."* #3
‡ Numbers indicate the institution from which the quotation was generated, which have been deidentified.	

Table 1. Quotations from grant applications of 12 institutions receiving CTSA funding in 2006, analyzed in 2011.

announcements and notifications regarding information such as the availability of resources, the results of studies, messages of appreciation, advertisements of ongoing studies, educational opportunities, and general information about the institution or their research. The announcements came in many forms, often targeted for the communities of interest. Examples included posters, ads, and Websites.

Some input from community
Also, commonplace (*n* = 11) was the establishment of some forms of PBRN, which were primarily composed of medical providers in the community surrounding the institution. These PBRNs were used largely as sites from which research participants could be recruited or as locations for research projects to be carried out. The descriptions of the PBRNs suggest that provider and patient perspectives would not be formally sought in developing and carrying out research projects; however, the PBRNs did provide some opportunity for the community-based PBRN staff to provide input.

Considerable input from community
All institutions (*n* = 12) also employed the strategy of having community members on community advisory boards (CABs) or other institutional boards, which were characterized as allowing considerable input from communities. Many institutions (*n* = 10) also solicited community member feedback on CTSA activities and several (*n* = 3) included community members on expert panels.

The strategy of including community members on councils or boards included having community representation on

institutional boards and committees otherwise comprising institutional affiliates, such as governance boards for the CTSA and institutional review boards (IRBs). In parallel, university affiliates, typically faculty, participated on the boards of community-based organizations or businesses in the area.

Institutions (n = 12) also convened CABs whose membership was exclusively or majority community members (*Table 1*). CABs were employed to assist at many levels—governing the community engagement core, overseeing an arm of community engagement activities in the core, or dedicated to specific projects. Some institutions combined institutional and noninstitutional members, while others had separate boards.

In addition, three institutions sought input from an expert panel or panels (one in both grants, one in original, and one in renewal). An expert panel—convened to share the expertise of members—functions similarly to a CAB. The expert panels were primarily composed of experts with academic appointments (*Table 1*).

Institutions also solicited input from the community in the form of feedback on engagement strategies (n = 10). These feedback opportunities were primarily survey-based, though some institutions also conducted focus groups. The feedback addressed specific events, such as training sessions, as well as in some cases, the entire CTSA community engagement program. Institutions did not document in their original or renewal applications how the feedback was incorporated into planning or to guide changes between the original and renewal applications.

High input from community
The most intensive form of community input on research was a form of community-researcher teams. A total of nine institutions named three forms of community-researcher teams: community members as consultants for a study (n = 2), as study staff (n = 5), or as co-investigators (n = 7). Some CTSAs explicitly sought nonaffiliated community partners as research partners and co-investigators (*Tables 1* and *2*).

Comparison between original and renewal applications
Renewal applications demonstrated that institutions planned to increase their community outreach and their financial investment in community engagement, as well as enhance mechanisms for connecting researchers and communities. In most cases, institutions continued both their capacity-building and research engagement strategies into their renewal application. The exception was in cases of particular strategies being more widely adopted by institutions by the time of their renewal application (*Table 2*).

Among capacity-building strategies, pilot grants were the strategy that saw the greatest increased use in the renewal applications. Pilot grants for community engagement were only addressed by three institutions in the original applications, but by the renewal were mentioned by all 10 (*Table 2*). All institutions acknowledged the benefit of pilot funding to promote community engagement and incentivize researchers to pursue the community engagement process (*Table 1*). CRCs had a more modest adoption, with only one additional institution choosing to adopt the strategy by the time of renewal (*Table 2*). The other capacity-building strategies, education and resources for connecting partners, were already in place in all institutions' original applications, and remained in all institutional renewal applications.

Among research engagement strategies, including community members as representatives on non-CAB boards or councils saw the greatest increased use in the renewal process (*Table 2*). In their original grants, only one institution described community members on an institutional board, in this case a board that oversaw the CTSA. By the renewal applications, seven institutions were describing some involvement of outside partners on boards. This was particularly true of having institutional faculty and staff on community partner boards, with less increase in the involvement of community members on institutional boards. Changes were less common among other research engagement strategies.

Strategy	Either (n = 12)	Original (n = 12)	Renewal (n = 10)
Capacity-building strategies			
Education	12	12	10
Pilot grants	10	3	10
Resources for connecting	12	12	10
Community research center	3	2	2
Research engagement strategies			
No input—announcements/ads	12	12	10
Some input—research networks	11	8	9
Considerable input—CABs	12	12	10
Considerable input—non-CAB boards	7	1	7
Considerable input—Expert panel	3	2	2
Considerable input—Feedback	10	7	8
High input—hire community members	5	4	5
High input—community as consultants	2	1	1
High input—community co-investigator	7	5	4

Table 2. Distribution of strategies in original (2006) and renewal (2010) applications, analyzed in 2011.

Discussion
The institutions in this study were required to include community engagement in their CTSA plans, and the 12 institutions focused their attention both on capacity-building strategies for institutional affiliates and community members, and on implementation of research engagement strategies. Institutions generally adopted familiar strategies for community engagement that are well-described in the literature.[17,21,22] The exceptions are the capacity-building strategies of pilot grants and CRCs.

Capacity-building can be an expensive and time-consuming process.[23,24] The CTSAs have created a structure wherein institutions, through their CTSAs, are undertaking capacity-building such as education of researchers on the principles of community engagement, and community members on research methods and human subjects protections. By building this type of centralized infrastructure development into

CTSAs, some of the burden of capacity-building for individual projects and programs is lightened. Furthermore, with pilot grants available, and in some cases, with the creation of CRCs, institutions are providing some of the resources necessary to overcome the cost and time burdens associated with engaging communities in research.

The CTSA funding of these institutions resulted in greater support for engagement within the institutions, which may result in expanded researcher familiarity and comfort with engaged research and increased sustainability of engagement in research. These types of outcomes should be evaluated in future research. Building capacity to engage is an essential first step to engagement around research projects. It may be some time before the NIH sees effects of the CTSA funding on research, but investment in capacity-building for community engagement should be seen as very valuable in the pursuit of engaged research and better translation of research into practice. Additional research to understand whether capacity has been built and sustained through the strategies described above will help evaluate the success of the CTSA program. Future work to provide a more comprehensive description of engagement strategies employed by all of the CTSAs, best practices developed through the CTSA consortium, and evaluation of those strategies would also add considerably to the field of community engagement in research.

The findings of this study should be interpreted in light of its limitations. There are multiple limitations to drawing conclusions about engagement from grant applications alone. First, grant applications may not reflect what institutions and communities did in practice. Second, this study did not interview institutional staff or community partners about their challenges and successes with funding. Third, we do not have a sense of whether engagement strategies help institutions and communities meet their intended outcomes.

Conclusion

The results have several implications. First strategies described in grant proposals focused largely on capacity-building to do engagement among institutional and community partners rather than focusing on conducting engagement itself. Though this was not the stated goal of the NIH, the NIH did acknowledge in the Request for Application (RFA) that capacity building would likely be necessary.[10] The findings confirm that institutions found it necessary to build capacity internally, among researchers, as well as among external partners. Furthermore, the fact that these strategies were either constant or expanded by the renewal suggests that the institutions realized the importance of capacity-building around engagement, even after 5 years of CTSA investment.

This project highlights how NIH funding has spurred institutional uptake of engagement-related activities, as well as the ways such funding has expanded well-known strategies to new research fields and community partners. Continuing this funding is a strong signal of support for community engagement. Importantly, potential spillover effects to non-CTSA institutions should not be discounted. Future work will be needed to determine the effects of community engagement and specific strategies for engagement within the CTSAs and in other institutions. The field of community-engaged research can benefit from the lessons of the CTSAs to affect changes in non-CTSA settings.

More work should also be done to gather community reactions to the CTSAs. The voices of the many communities engaged by the 12 CTSAs are not reflected in this research, but they may be very instructive. The health of communities is the ultimate focus of the biomedical research being conducted within these CTSAs. It is a goal best met with the participation and input of communities themselves.

Conflicts of Interest
None.

Ethical Approval
Not applicable.

Previous Presentations
Preliminary findings from this work were presented to the CTSA Community Engagement Key Function Committee in an informal conference call presentation.

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