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## Assessment of Academic-Community Partnerships in Translational Research

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### Abstract

**Objective:** The Community Engagement Core (CEC) of the Center of Collaborative Research in Health Disparities focuses on developing and implementing strategies to increase academic-community collaborations and partnerships, enhance the recruitment and retention of study participants, disseminate research findings to a broader audience, and mitigate health disparities in Puerto Rico.

**Methods:** In order to assess the current state of academic-community relationships and also collect ideas for their improvement, a strengths, weaknesses, opportunities, and threats (SWOT) analysis was conducted. Participants for the SWOT analysis activity were drawn from a pool of stakeholders at the University of Puerto Rico Medical Sciences Campus and a group of community representatives.

**Results:** The areas identified by the group for the CEC to focus on were weaknesses such as 1) a lack of interaction and involvement with community leaders, 2) limited numbers of advocacy groups in several health areas, and 3) few research consortia. Opportunities identified included the possibilities of 1) creating alliances between academia and industry, municipalities, and community-based organizations, 2) advocating integration in research proposals, and 3) establishing a network of researchers and community leaders.

**Conclusion:** The SWOT analysis activity served to foster relationships with diverse community stakeholders and select members for a community advisory board to collaborate in developing educational activities for our researchers and communities. These findings will also help the CEC establish a strategic plan that should be able to supply a strong community-based participatory research approach that would help mitigate health disparities in Puerto Rico, as well as define the strategies to implement such recommendations.

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## Resumen

El Componente de Vinculación Comunitaria (CVC) del Centro de Investigación Colaborativa en Disparidades de Salud (CCRHD, por sus siglas en inglés) se enfoca en desarrollar e implementar estrategias para aumentar colaboraciones académicas-comunitarias, mejorar reclutamiento y retención de participantes de estudios científicos, difundir resultados de investigaciones a un público más amplio y mitigar disparidades de salud en Puerto Rico.

Con el fin de evaluar el estado actual de las relaciones académicas-comunitarias y también identificar ideas para mejorar, se realizó un Análisis de Fortalezas, Oportunidades, Debilidades y Amenazas (FODA). Los participantes para la actividad fueron identificados de un grupo de posibles interesados en el Recinto de Ciencias Médicas de la Universidad de Puerto Rico y representantes comunitarios.

Las áreas identificadas por el grupo para que se centre el CVC fueron debilidades tales como 1) falta de interacción y participación con líderes comunitarios, 2) número limitado de grupos de defensa en áreas de salud y 3) pocos consorcios de investigadores. Las oportunidades identificadas incluyeron 1) crear alianzas entre academia e industria, municipios y organizaciones comunitarias, 2) integración de comunidades en propuestas de investigación, 3) establecer una red de investigadores y líderes comunitarios.

El Análisis FODA sirvió para fomentar las relaciones con diversos representantes de la comunidad y seleccionar miembros para un Consejo de Asesores Comunitarios para colaborar en el desarrollo de actividades educativas para nuestros investigadores y comunidades. Estos hallazgos también ayudarán al CVC a establecer un plan estratégico que responda a la necesidad de un enfoque de investigación participativa basado en la comunidad que ayude a mitigar las disparidades de salud en Puerto Rico, como también definir las estrategias de implantación de las oportunidades identificadas.

## Keywords

Community engagement; SWOT analysis; Translational research

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The Center for Collaborative Research in Health Disparities (CCRHD) of the University of Puerto Rico Medical Sciences Campus aims to promote research in minority health and health disparities and develop and support a diverse biomedical research workforce, as well as an efficient research infrastructure, in order to reduce current health disparities in Puerto Rico. The CCRHD is composed of the following cores: Administrative, Investigator Development, Research Infrastructure, Research Projects, and, most recently, Community Engagement. The Community Engagement Core (CEC) of the CCRHD focuses on increasing academic-community partnerships involved in translational research. To achieve this goal, the following specific aims have been identified:

- Assess existing academic-community partnerships in Puerto Rico that are involved in translational research and recommend the resources and strategies that are needed to enhance and expand these partnerships.

- Recruit and coordinate a community coalition team (CCT) that will advise CCRHD investigators on research areas of high interest to the community, strategies to improve the recruitment and retention of study participants, and methods to disseminate research findings to a variety of audiences.
- Increase the ability of CCRHD investigators to understand and incorporate community perspectives into research projects involving minority health and health disparities.
- Evaluate the activities of the CCRHD-wide CCT and the extent to which the CEC has achieved its goals each year.

The Centers for Disease Control and Prevention (CDC) defines “community engagement” as “[t]he process of working collaboratively with and through groups or people affiliated by geographic proximity, special interest, or similar situations to address issues affecting the well-being of those people” Community engagement often creates partnerships and coalitions that not only affect both extant systems and the distribution of resources but also that contribute to changing relationships among partners and stimulating policy, program, and practice changes; thus, community engagement can play a critical role in improving the health of a community and its members owing to its power to provoke beneficial environmental and behavioral changes (1).

Community engagement can also be considered as a continuum of community involvement that develops over an extended period of time. According to the CDC’s Principles of Community Engagement (1), there are several levels of increasing community involvement in research practices: 1) Outreach: establishes communication with the community and channels for outreach. 2) Consultation: develops connections between academics and community representatives. 3) Involvement: lays the foundation for partnerships. 4) Collaboration: as a given partnership grows, so does the trust within the community. 5) Shared leadership: represents the establishing of a strong bidirectional relationship.

In order to assess the existing academic-community partnerships involved in translational research and thus be able to recommend resources and strategies to enhance and expand such partnerships in the CCRHD, the CEC coordinated a strengths, weaknesses, opportunities, and threats (SWOT) analysis activity. This constituted the first step in community engagement, as it was an outreach effort aimed at involving representatives from community organizations in a participatory activity that would inform the strategies and activities of a core of an academic institution.

A SWOT analysis is a strategic planning framework; these analyses are widely used in the evaluation of an organization, a plan, a project, or a business activity. They are extensively used in small, medium, and large organizations with the objective of defining the current state of the organization. A SWOT analysis is a significant tool for situation analysis that helps to identify organizational and environmental factors. Consequently, it helps organizations define their strategies for achieving expected goals. A SWOT analysis has 2 dimensions. The internal dimension, which includes organizational factors (strengths and weaknesses), and the external dimension, which includes environmental factors (opportunities and threats) (2).

Strengths are defined as those internal capabilities that an organization currently has and that can be used to achieve goals and results. Weaknesses, sometimes identified as limitations, are internal factors that need to be further addressed if an organization is to achieve its goals. Every organization is challenged to turn weaknesses into strengths. Organizational strengths consist of competencies that play an active role in an organization's achieving of its organizational goals. Organizational weaknesses have the potential to lead an organization to inefficiency and ineffectiveness. Opportunities constitute conditions in the external environment that could support an organization in its tackling of existing issues or its enhancing of existing services. Threats are all environmental factors that can stand in the way of organizational efficiency and effectiveness. Threats cannot be controlled but sometimes can be mitigated by creating an internal awareness of how these threats may impact the organization. According to Gurel and Tat:

External opportunities and external threats refer to economic, social, cultural, demographic, environmental, political, legal, governmental, technological, and competitive trends and events that could significantly benefit or harm an organization in the future (2).

SWOT analyses have been used before in the medical sciences to assess different topics and research questions. For example, Norwood and collaborators conducted a SWOT analysis with health care executives to identify the factors of successful oral health integration in federally qualified health centers (3). Kapoor and collaborators reviewed the findings of a SWOT analysis to examine the role of pharmacogenetics in public health and clinical health care as that role corresponds to the perspectives of individuals (scientists, patients, and physicians), health care institutions, and health systems (4). Price and collaborators did a SWOT analysis to answer the following question: "What are the strengths, gaps, expectations, and barriers to research engagement in clinical trials as communicated through social media?" (5) Rica and collaborators consider SWOT analysis to be a valuable strategy in the systems change process for creating an LGBTQ-inclusive practice setting in community health care (6). Meanwhile, Holtgrave and Greenwald did a SWOT analysis of the National HIV/AIDS strategy document (7). According to Turankar and collaborators, SWOT analysis is a handy tool in the health care sector and provides researchers with opportunities to inquire about topics such as quality patient care, appropriate drug selection, and the utilization of equipment, among others (8). Moreover, it helps those conducting the analysis (multidisciplinary teams, for example) to understand the topic of interest from multiple perspectives.

The CEC coordinated a SWOT analysis activity in order to assess the state of academic-community partnerships in health-disparities research in Puerto Rico. The results obtained from this activity were intended to aid the CEC in determining and then recommending the resources and strategies that are needed to enhance and expand such partnerships in the CCRHD. This effort was the one of the first activities conducted by the CEC and had the overall goal of involving representatives from local community and health organizations in a participatory activity that would inform the strategies and activities of a core component of a research center.

## Methods

### Participants

Prospective participants for the SWOT analysis activity were identified from a pool of stakeholders at the University of Puerto Rico Medical Sciences Campus, community leaders, and health professionals. We invited the researchers affiliated with the CCRHD as well as representatives from health organizations, members of the health industry, and patient advocates who were involved with health disparities and/or had experience with Community Based Participatory Research (CBPR) to take part. A total of 27 people participated in the SWOT analysis activity; 48% were members of academia and 52% were community representatives.

### Design

The design used for this activity was a non-experimental, cross-sectional, and exploratory one. A non-experimental design does not manipulate variables but rather observes people or groups in their natural environments. These types of design are based on observation without intervention and, later, the analysis of the observed data. On the other hand, a cross-sectional design is one in which data are collected to study a population at a single point in time and with the purpose to examine the relationships between the variables of interest. Finally, an exploratory design aims to explore a topic of interest in order to better understand it but without establishing correlational or causal relationships.

### Process

On the morning of the activity, a brief introduction presenting the CCRHD, the CEC, and SWOT analysis was made; in the afternoon, the participants proceeded to engage in the SWOT analysis. The participants were divided into 4 subgroups to discuss and identify the strengths of, weaknesses of, opportunities regarding, and threats to current academic-community relationships. They were provided with a set of questions to guide the discussion:

- What is the status of existing academic-community relations?
- What is currently working?
- What is not working?
- How could we expand community collaboration?

After they had discussed the issues and written their answers on a piece of paper, the members of each group chose a representative to present their findings to the general group. Each participant had 3 votes, using each of 3 colored stickers to select the topics that he or she felt best addressed the questions above. Finally, each participant selected what he or she considered to be the top priorities for the CEC to focus on.

### Analysis

In order to analyze the results from the SWOT activity, we grouped the responses using the categories strengths, weaknesses, opportunities, and threats, each in relation to community

engagement in health-disparities research. The responses from each sub-group were written down during the activity and then unified in a single document that was divided into the aforementioned categories. Then we selected the top 3 responses from each category based on the participants' votes during the activity. These responses were considered to denote the primary strengths of, weaknesses of, opportunities regarding, and threats to academic-community relationships in translational research.

## Results

Here we present the top 3 responses of each category that the group selected during the SWOT analysis activity.

### Strengths

1. The number of research projects that require community outreach and/or engagement
2. On-going research with direct impact on communities
3. The growing awareness of the importance of community engagement

The main strength identified was the growing awareness of the importance of engaging communities in research activities. This awareness is an asset that can help the CEC achieve its goals due to the recognition of both the CCRHD-affiliated researchers and the community that strategies to include communities in the research process are urgently needed. In addition, CCRHD-affiliated researchers are open to learning and implementing strategies to include communities in their research process, whether doing so is meant to assist in the participant recruitment process or facilitate the dissemination of research findings.

### Weaknesses

1. The lack of interaction and involvement with community leaders
2. The limited number of advocacy groups in several health areas
3. The need for consortia of researchers interested in community outreach/engagement

The main weakness of the current relationship between academia and the community is that there is little involvement of community representatives in research projects concerning health disparities. This is an issue that can be addressed only in the long term because in order to involve communities in research activities, researchers must understand not only what community engagement is but also the different strategies to achieve it, as well as learn how to implement CBPR practices. This requires the further education of researchers so they can value the contribution of the community in terms of selecting research projects to address current health disparities.

### Opportunities

1. Create alliances between academia and industry, municipalities, and community-based organizations

2. Advocate the participation of the community in health-disparities research
3. Create a network of researchers interested in community outreach/engagement

The main opportunity that needs to be explored and developed is the creation of diverse alliances that will enrich and benefit research related to health disparities in Puerto Rico. The first step is to recruit a CCT to assist the CEC in its endeavors as well as contacting various community organizations to explore future collaborations.

### Threats

1. Current fiscal constraints
2. The shortage of experts to identify federal funds and assist in writing grant proposals
3. Weak or deficient infrastructure that, in its current state, is unable to adequately facilitate community outreach/engagement

The threat that can be addressed is that of the deficient infrastructure that does not adequately facilitate community engagement. Within the CCRHD, the recently established CEC should aim to become a competent, effective unit that will expedite community engagement between CCRHD-affiliated researchers and representatives of those sectors of interest related to health disparities. Furthermore, we are certain that more infrastructure is needed at the systemic level to make sure that community engagement is an essential part of all research activities.

### Discussion

The SWOT analysis activity provided several important outcomes that are worth mentioning. First, the strengths of, weaknesses of, opportunities regarding, and threats to effective collaborative research on health disparities were identified using a participatory framework. This activity provided the first steps to connecting CCRHD investigators to potential community collaborators. The need to foster relationships with diverse community stakeholders (community organizations and leaders, patient advocates, industry representatives, government programs) was deemed to be a priority. An enhanced awareness of the importance of community engagement in research activities was instilled in the participants. A CCT was formed from the community representatives that attended the SWOT activity. The findings from the SWOT analysis activity were incorporated into the CCRHD-CEC strategic plan.

As part of the CEC strategic plan, several initiatives were completed as result of the SWOT activity. Those activities consisted of meetings with CCRHD-supported researchers and infrastructure core leaders and meetings with various community and health organizations. Other activities included 2 seminars about Citizen Science and Report Back Strategies. The CEC participated in various academic conferences to promote the initiatives. Finally, the CEC coordinated an RCMI-CCRHD retreat that included a panel of community representatives who discussed their experiences with academic research and establishing collaborative relationships with universities and a presentation about how to successfully

communicate scientific results to the general public and the media. The retreat also included both a presentation about photovoice as a tool for community engagement in research and an exercise to briefly practice how to conduct this qualitative technique.

For the next funding cycle, the CEC plans to implement a series of initiatives aimed at encouraging CCRHD-supported researchers to engage with the community. We want to provide active learning experiences that communicate scientific concepts and findings to a broader audience. Several strategies for doing so, for example, are to organize a series of workshops aimed at providing theoretical and practical knowledge for science communication, to invite researchers to present their research projects to CCT members, and to coordinate community visits to facilities providing infrastructure core services. Another initiative is the implementation the Community Engagement Studio, a model developed by the Meharry-Vanderbilt Community Engaged Research Core of the Vanderbilt Institute for Clinical and Translational Research that focuses on coordinating a panel of community experts to evaluate a research proposal.

Finally, we believe that the SWOT analysis activity served as a great starting point to develop a strategic plan for the CEC. It provided significant information regarding both the strengths that must be considered and the opportunities that should be taken advantage of in order to achieve community engagement. It was also useful in identifying the weaknesses that must be addressed and the threats that should be avoided and/or mitigated. Overall, the activity confirmed the importance of receiving input from the population that you want to impact; doing so will grant researchers and community coordinators the participating community's unique perspective and inside knowledge about the current state of academic-community relationship.

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