Community Engagement

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The Medical College of Wisconsin (MCW) is dedicated to leadership and excellence through community engagement (CE) as one of its missions. For the CTSI, the specific aims of the Community Engagement Program are designed to overcome barriers to community engagement in research. Our community engagement efforts are to serve as vehicles for meaningful engagement through fostered bi-directional communication and learning between communities and academics. Our specific aims include (1) Engaging communities as Scientific Citizens by increasing scientific literacy regarding the benefits of research and; (2) Engaging research investigators as Citizen Scientists by improving community engagement strategies and competencies through faculty development, skill-building and training in community-engaged scholarship and community-based participatory research.

Our Community Engagement program has uniquely engaged with faculty leadership and citizen advisors since the inception of the grant. CE’s Citizen's Advisory Council (CAC) Co-Chair from the United Community Center was transitioned to Mr. Ricardo Diaz, Executive Director. Mr. Diaz assumed the responsibilities and in collaboration with Co-Chair Terry Brandenburg provided significant input for the planning of the next several years in response to recommendations from the November 2012 CTSI External Advisory Board and Program Officer visit. Specific recommendations have already been placed into action. The Leadership Team and CAC have convened regularly to provide input on and perspective for the ongoing and new projects of the CE program. CTSI CE program recently reviewed with these advisors the 2013 Institute of Medicine’s Report on the CTSA Programs; a wealth of input and direction for strategic planning in 2014 was discussed. We are pleased to learn that the IOM recommends similar efforts with a CAC.

CE has put tremendous effort towards leveraging our faculty’s experience and knowledge for additional funding to expand our program and the capacity of relationships with community based organizations. Advancing the art and science of Community Engagement in Research has also been of high priority for the team. New community-academic (C-A) partnerships have been created through relationship building with investigators across the translational continuum. In many cases, existing C-A partnerships have transformed with the infusion of T0-T4 academics. We anticipate learning a wealth from the transformation of CEnR practice with this expansion of C-A research investigators.
Funding for Community-Engaged Research is on the Rise

Funding proposals applied for and received, by year

Funding Proposals applied for and received by source:

Funding Proposals received by thematic area:

Community representation on CE research proposals has increased by 35%.
This year we have offered workshops with presentations from experts of the field on current knowledge and rising themes in Community Engagement in Research (CEnR). These workshops have also been designed in a way to provoke new discovery through dialogue and collaboration among local investigators and community-based organization participants. Topics have over the past year included: Community Health Informatics and Community Disaster Resilience. These workshops have led to local news coverage, collaborative grant proposals, and increased outreach. Planning for these workshops has improved institutional diversity and we have seen a marked increase in participation from the community and partner institutions in planning and research. Collaborations with other CTSI key functions have also increased.

**Trends in Participation By Organization Type**

3 Workshops since Oct. 2012

252 Registrants since October 2012

84 Average number of registrants per workshop

Near doubling of community representation

Increases in national/ international institutional participation

Participation of academic researchers was highest when topic was highly specialized to specific areas of research (CEnR-CER)
Exploring the IMPACT of Science Cafés through Evaluation and Research

CE program has consistently offered a Spring and Fall series of Science Cafés open to anyone. The Science Cafés are opportunities for researchers at the MCW and other academic institutions to have a conversation with the community in a bi-directional manner and to improve health literacy. These events also promote dissemination of research results from local faculty at MCW or through the CTSI; this is a unique venue for researchers to share their results with the community and provides an opportunity for the community to discuss the research with the scientists firsthand. This year we are exploring the impact of Science Cafés through evaluation and research and plan to publish our preliminary findings in the coming months. The overall goal of the CTSI Community Engagement Science Cafés evaluation is to better understand if and how attending a Science Café influences a community members’ confidence or disposition towards scientific and health topics.

<table>
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<th>I am confident in my:</th>
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<tbody>
<tr>
<td>1. General understanding of the methods used by scientists</td>
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<td>2. Ability talking about [Science Café topic] with a health care provider</td>
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<td>3. Ability to tell what information is trustworthy or not on [Science Café topic]</td>
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<tr>
<td>4. Ability to find other sources of information on [Science Café topic]</td>
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<td>5. Ability to speak to a scientist or a health researcher</td>
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Special Notes
In 2013, we have a total of 9 Cafés scheduled and thus will not have a complete number of registrants until the 12/2013
The Milwaukee School of Engineering (MSOE) is a pipeline program that works annually to combine high school student and teachers with local researchers to learn about research topics through designing and building a molecular model. This work makes up the SMART Teams. Models help students to explore science as a process and the structure–function of proteins specific to the project. The students develop abstracts, poster and oral presentations and present at a local MCW event and at a national conference.

SMART Teams are on the Rise
Number of SMART Teams, by year

![Chart showing the increase in the number of SMART Teams formed each year from 2009-2010 to 2013-2014.](chart)

Engaging the Community through Science Research

![Bar chart showing the increase in the number of students, teachers, and mentors participating in SMART Teams each year from 2009-2010 to 2013-2014.](chart)

SMART TEAMS

Yearly increases in the number of SMART Teams formed

Near continuous increase in the number of students that participate in SMART Teams

Annual increases in the number of local high school teachers that partake in SMART Teams

Increase in the number of academic mentors

Improved diversity of academic mentors since 2009

In 2011, academic mentors began coming from community based, non-CTSI institutions

Mentor Participation, by institution, by year

![Bar chart showing the number of mentors from different institutions each year from 2009-2010 to 2013-2014.](chart)
Advancing Healthier Wisconsin Program Background

MCW awards funds to community-MCW academic research through its Healthier Wisconsin Partnership Program (HWPP) partnerships which are committed to improving the health of Wisconsin residents. Since 2004, over $40 million dollars have supported over 140 projects. CE program seeks to gain knowledge to improve the science of CEnR through evaluation and lessons learned from these past and current projects. The CE team, have in the past several years, submitted proposals for translational research which includes community partners and CTSI trans-disciplinary academic research teams.

Social Networking Analysis

(Preliminary Visualizations and Data)

The following chart SNA visualizations of two funding cycles of community academic partnership. Visualizations as dual mode with projects represented by red nodes and community based partners represented by blue nodes.

Trends in Community-Academic Partnerships in SE Wisconsin

- Small change over time in the structure of the inter-organizational network reflected in the HWPP data
- Number of community based organizations per project increased somewhat from 2005-8 to 2009-13
  - The reduced number of projects in the 2009-2013 period reflects funding constraints in 2009 and 2010, as well as the goals of the second HWPP strategic cycle to fund larger, longer duration projects – thus focusing on fewer, higher quality initiatives.
- Connectivity of the network was mostly unchanged over time
- Each period, there was one large component that connected the vast majority of organizations to each other through co-participation on projects
- Large majority of participating organizations were involved in only one of the two period
- Organizations that participated in both periods tended to be involved in more projects in the first period than those that participated only in the first period (Cohen’s d = .93, randomization t-test p<.0001)
Looking Ahead

The potential that comes with the success of this project spans across multiple realms which currently could be considered barriers to Community Engagement in Research. When transformation is achieved, people will have opportunities to exchange with the scientists, in a meaningful way, their health needs for research and improve their health through new therapies and treatments realized through clinical and translational research. The project dedicates its efforts to creating **Scientific Citizens** and **Citizen Scientists**.

- **CE program will seek to establish a better understanding and develop working models for integration of CEnR within every phase of the translational continuum and among multi-institutional, multidisciplinary collaborations across our CTSI partner institutions. CE program will approach scientists in various levels of research to design next steps in this area.**

- **CE program also seeks to identify approaches for connecting the essential voice of the citizen in relation to local research through guiding scholars in Community Engagement in Research (either formally or informally), developing educational and professional competencies in the art and science of community engaged research.**
  - Those studying to become health-related researchers, at any stage of the translational continuum, have access to gaining perspective and skill involved in communicating their knowledge with a lay person. This project seeks to provide opportunity for the **next generation of investigators** to practice working with the public, develop competencies in principles of community engagement in research and identify with being a part of a **transdisciplinary** research team.
  - CE program would like to begin understanding the consultative and mentoring role of the existing and upcoming Community Engagement in Research faculty. These roles are also considered to be expanded to Trans disciplinary teams as the infrastructure evolves within our own CTSA.

- **The general public in Wisconsin has opportunities to become more engaged with the health-related research occurring locally. This project seeks to continue to support this type of gain in a better understanding of science and the benefits of such research through offering educational presentations with researchers, developing **community-academic research** partnerships that are translational in nature, and by opening doors to community members to play key roles as members of research teams or participants in studies that seek to improve a health problem within the context of their lives. A deeper integration of these efforts, community-academic partnerships and making other types of connections will be essential for practical application of other IOM recommendations.**
## Appendix – Community Engagement

### Table 1: CTSI CEnR Workshop Details and Outcomes

The following table describes purpose and current products from recent workshops.

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<th>Year</th>
<th>Workshop Title and Purpose</th>
<th>Outcomes</th>
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<td>2012</td>
<td><strong>1st Community Engagement in Research Conference</strong>&lt;br&gt;Community Engagement in Research and Comparative Effectiveness Research (CEnR-CER) Bridge Building Day Workshop&lt;br&gt;• Examine the national and local perspectives on collaborative research between Community Engagement and Comparative Effectiveness&lt;br&gt;• Generate, through active, facilitated small group discussions, a baseline framework for collaboration on a broad class of needs and assets&lt;br&gt;• Provide an opportunity for networking among local researchers interested in collaboration on existing and new research initiatives</td>
<td>• National Presentation (invited)&lt;br&gt;• Poster Presentations&lt;br&gt;• Manuscript&lt;br&gt;• Co-Sponsored PCORI Chief Scientific Officer Visit to MCW&lt;br&gt;• PCORI CDRN Research Proposal led by Bioinformatics KF and includes CEKF</td>
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<td>2013</td>
<td><strong>2nd Community Engagement in Research Conference</strong>&lt;br&gt;Community Health Informatics Workshop&lt;br&gt;• Provide an opportunity to network among community based organizations and local researchers interested in collaboration on existing and new initiatives focusing on information technology.&lt;br&gt;• Showcase projects currently in development around innovative ways&lt;br&gt;• Provide an opportunity for integrating approaches around common languages and creating products that lay the foundation for the future of&lt;br&gt;• By identifying these, both community and academic researchers can form opportunities for integrating approaches, developing a common language and creating a product(s) that lay the foundation for the future of informatics use in research.</td>
<td>• Follow-up Discussions with GE Healthcare&lt;br&gt;• Manuscript&lt;br&gt;• Input on Design and Functionality of the CTSI CEKF Website Pages&lt;br&gt;• Ongoing workgroup&lt;br&gt;• Others</td>
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<td>2013</td>
<td><strong>3rd Community Engagement in Research Conference</strong>&lt;br&gt;Advancing Communities’ Disaster Resilience&lt;br&gt;This conference was tailored for academic, clinical and community researchers interested in developing a local/regional/international pathway to whole community emergency preparedness. Participants actively engaged in dialogue around the following questions;&lt;br&gt;• What are current approaches and trends in Disaster Management practice and science?&lt;br&gt;• What are the community and academic perspectives and experiences on major local disasters and risks which can enhance a shared awareness and align for resilience during future events?&lt;br&gt;• How can existing community-academic partnerships reveal potential and existing community assets available for “in-place” preparedness and disaster/emergency response?&lt;br&gt;• What are potential next steps for establishing a “whole community disaster response”?</td>
<td>• Local News Coverage&lt;br&gt;• Collaborative Grant Proposal in Development&lt;br&gt;• Data for Research Study</td>
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Table 2: The following graph presents the annual products of dissemination by the CTSI CEKF.

Community Engagement Projects Spanning the Translational Continuum

- CTSI CEKF built a team of community and academic partners which spanned the public health setting, basic science research, and community engaged research. This NSF proposal, for a basic science post-doctoral fellowship, infused with CEnR, is focused on the intersection of genomics, ethics, and community.

- CTSI CEKF was granted a Pilot and Collaborative award through the CTSI for a community-academic partnership project titled \textit{mPeer}. The project is in collaboration with the Department of Computer Science at Marquette University, VA Hospital, and the community partner, DryHootch which focuses on serving the needs of veterans who have survived the war, survive the peace.

- CEFK is innovating with a new research team in Waukesha County called Diabetes: Working Wellness in Waukesha- Together (DW3T). This is the first project where our faculty engaged in a community-academic partnership is utilizing the REDCap software at CTSI for a longitudinal, community-based research study. Community investigators have driven the development of the data collection tools and input efforts.