WASHINGTON UNIVERSITY IN ST. LOUIS
Institute of Clinical and Translational Sciences

Community-Engaged Research in the St. Louis Metropolitan Area: Mapping Existing Relationships

Washington University in St. Louis

ACKNOWLEDGEMENTS

Prepared by:
Ryan Bell, MPH
Bobbi J. Carothers, PhD
Douglas A. Luke, PhD
Washington University Institute of Clinical and
Translational Sciences Tracking and Evaluation Team

For more information, please contact:
Douglas A. Luke, PhD
Center for Public Health Systems Science
Washington University in St. Louis
700 Rosedale Ave., CB 1009
St. Louis, MO 63112
dluke@brownschool.wustl.edu

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EXECUTIVE SUMMARY

This report describes the first examination of community-engaged research for the Washington University Institute of Clinical and Translational Sciences (ICTS), the Institute for Public Health (IPH), and the Alvin J. Siteman Cancer Center at Barnes Jewish Hospital and Washington University School of Medicine (SCC). This project will be conducted on a biennial basis to assess changes in community-engaged research over time.

The current community-university research network in the St. Louis metropolitan area was identified in order to establish a baseline for future comparisons. Investigators from ICTS, IPH, and Siteman Cancer Center (SCC) were asked if they had conducted research with a community organization in the past 12 months. The community organizations identified by university investigators then received a survey to evaluate these relationships. Major findings include:

- A small number (4%) of ICTS, SCC, and IPH investigators reported community research partnerships.
- Investigators partnered with 86 community organizations across a wide variety of research topics.
- Six types of community organizations were identified: Health Services, Educational, Advocacy, Faith-Based, Government, and Foundation.
- Current research topics commonly included obesity, mental health, and violence & injury prevention.
- Community organizations anticipated increasing interest in health services research.
- Community organizations were mostly clustered into two locations: in the Central West End neighborhood surrounding the Washington University School of Medicine and downtown St. Louis.
- Research relationships were strongest and most frequent with health services organizations, and weakest and least frequent with foundations.
- Lack of capacity (funding, staff) and lack of time were the two biggest reported barriers to community-engaged research.
- Nearly half of the community organizations stated they had not heard of the ICTS prior to taking the survey.
- Despite limited awareness of ICTS among community organizations, partners had high interest in getting involved in future research.

The Center for Community-Engaged Research and the ICTS should work to strengthen existing research partnerships and look for opportunities to enhance partnerships by pairing individual ICTS investigators and community organizations with similar interests.

INTRODUCTION

Institute of Clinical and Translational Sciences

In September 2007, Washington University in St. Louis (WUSTL) was awarded a Clinical and Translational Science Award (CTSA) from the National Institutes of Health, enabling the creation of the Institute of Clinical and Translational Sciences (ICTS). The overall goal of the ICTS is to serve as the intellectual and physical home for clinical and translational research, clinical research training, and career development to help overcome the traditional boundaries between disciplines, departments, institutions, and external partners.

The Tracking and Evaluation (T&E) team was established to conduct the evaluation of the overall goals of the ICTS. The vision of the T&E team is to utilize evidence-based and innovative evaluation methods to 1) inform ICTS strategic planning and program improvement activities, and 2) assess the impact of ICTS on clinical and translational science that results in clinical applications and meaningful community health outcomes.

An important goal of the ICTS is the development of research relationships between ICTS investigators and community organizations. Many ICTS researchers are also affiliated with the Alvin J. Siteman Cancer Center at Barnes Jewish Hospital and Washington University School of Medicine (SCC) and the Institute for Public Health (IPH). All three research institutions were included in this project in order to gain an understanding of the extent and usefulness of community-engaged research at Washington University.

This report describes the first round of data collection examining community-engaged research by the ICTS T&E team. Future rounds will be administered on a biennial basis.

Center for Community-Engaged Research

The Center for Community-Engaged Research (CCER) was established by the ICTS in 2007 to foster collaborative research partnerships between and among the community at large, community organizations, ICTS partner institutions, community-based health providers, and researchers. The overall goal of CCER is to facilitate active engagement and participation by community stakeholders as partners in all stages of the clinical and translational research process to improve community health. To achieve its goal, CCER has three specific aims:

1. Expand bi-directional communication with St. Louis communities to make research within the ICTS more relevant and responsive to the health needs and priorities of the entire community.
2. Provide ongoing education to ICTS investigators and trainees on the scientific and ethical principles of community-engaged research and provide them strategies to develop and disseminate culturally appropriate information about research findings. Provide ongoing education to the public and to St. Louis community organizations about the importance of participating in research to improve health and the quality of health care in the region.
3. Strengthen and expand collaborative research partnerships between ICTS cores, investigators, trainees, and community stakeholders to create synergy and facilitate effective and responsive community-engaged research to promote community health.

Report Purpose

This report outlines the key findings from the evaluation of community-engaged research among ICTS and WUSTL investigators.

The goal of this project is to identify the current community-university research network and establish a baseline for future comparison. This report will answer:

1. What does the community/university research network look like?
2. How useful do partners from community organizations find their research ties with university investigators?
3. How are ties between university researchers and community organizations used to support development of research activities?

This report is the first of its kind for the ICTS and is consistent with the direction of other CTSAs: focusing

on the current landscape of community-engaged research partnerships and allocating resources to strengthen partnerships over time. Results from this report will be used to inform programmatic planning to enhance community-engaged research relationships and illustrate ICTS progress in meeting its aims over the next five years.
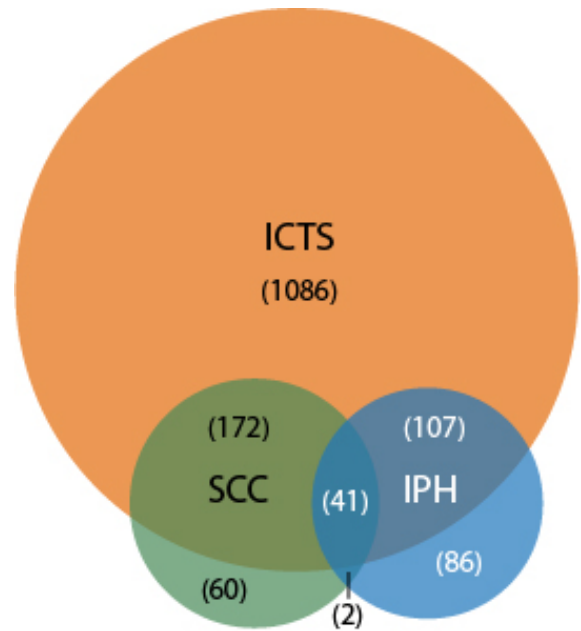
Community Engagement Surveys

T&E administered surveys in two stages in order to collect information from both ICTS investigators and community organizations:

1. **Survey 1: WUSTL/ICTS Investigators**
   Investigators from ICTS, SCC, and IPH received a survey to identify community organizations participating in current research partnerships.
2. **Survey 2: Community Organizations**
   At least one representative from each identified organization was surveyed to collect information about those research partnerships.

Survey 1: WUSTL/ICTS Investigators

A survey was administered in the autumn of 2012 to every ICTS, SCC, and IPH member (N=1,554) asking if they conducted research with any community organizations in the St. Louis metropolitan area within the past 12 months (see Figure 1). Community organizations were defined as non-academic organizations that could include: community health coalitions, advocacy groups, foundations, or government/public organizations. Investigators were asked to list up to 10 community organizations they had engaged with for research purposes.

Figure 1. Affiliation of investigators who received the WUSTL/ICTS Investigators survey

The survey remained open for two weeks and received 641 responses (41.2%) with 63 investigators (4%) indicating they had conducted research with a community organization in the last 12 months. Given the low response rate, this 4% figure should be considered a low estimate, as it is likely that some non-respondents had community partnerships.

4% of investigators reported community-engaged research partnerships

The 63 investigators identified 86 organizations with each investigator collaborating with an average of 1.9 community organizations (see Figure 2).

Figure 2. Number of community partners per investigator (of those who reported having community partners)

A representative from each community organization identified in the WUSTL/ICTS Investigators survey received the Community Organization survey in the spring of 2013. Data were aggregated in cases where more than one person from an organization took the survey. There was an organizational response rate of 72% for this second stage survey.

The survey was designed to collect the following information:

- Level of partnerships with ICTS and WUSTL affiliated organizations
- Community organizations' current and future research interests
- Barriers to engaging in research
- General attitudes toward collaboration
- Knowledge about ICTS
- Interactions with other community organizations

FINDINGS

Partner Identification

The community organizations identified by investigators were mapped across the St. Louis region. Figure 3 shows the distribution and density of community organizations.

The community organizations were located across seven counties in the St. Louis metropolitan area—five counties in Missouri and two counties in Illinois.

Community organizations were concentrated in two general locations; one in the Central West End in close proximity to the WUSTL School of Medicine and another in downtown St. Louis. Additional GIS maps can be found in Appendix A.

Table 1 lists the community organizations and number of ICTS, SCC, and IPH investigators who identified them as being community research partners.

Figure 3. Location (main) and heat map (insert) of community organizations who were named as partners in the past 12 months
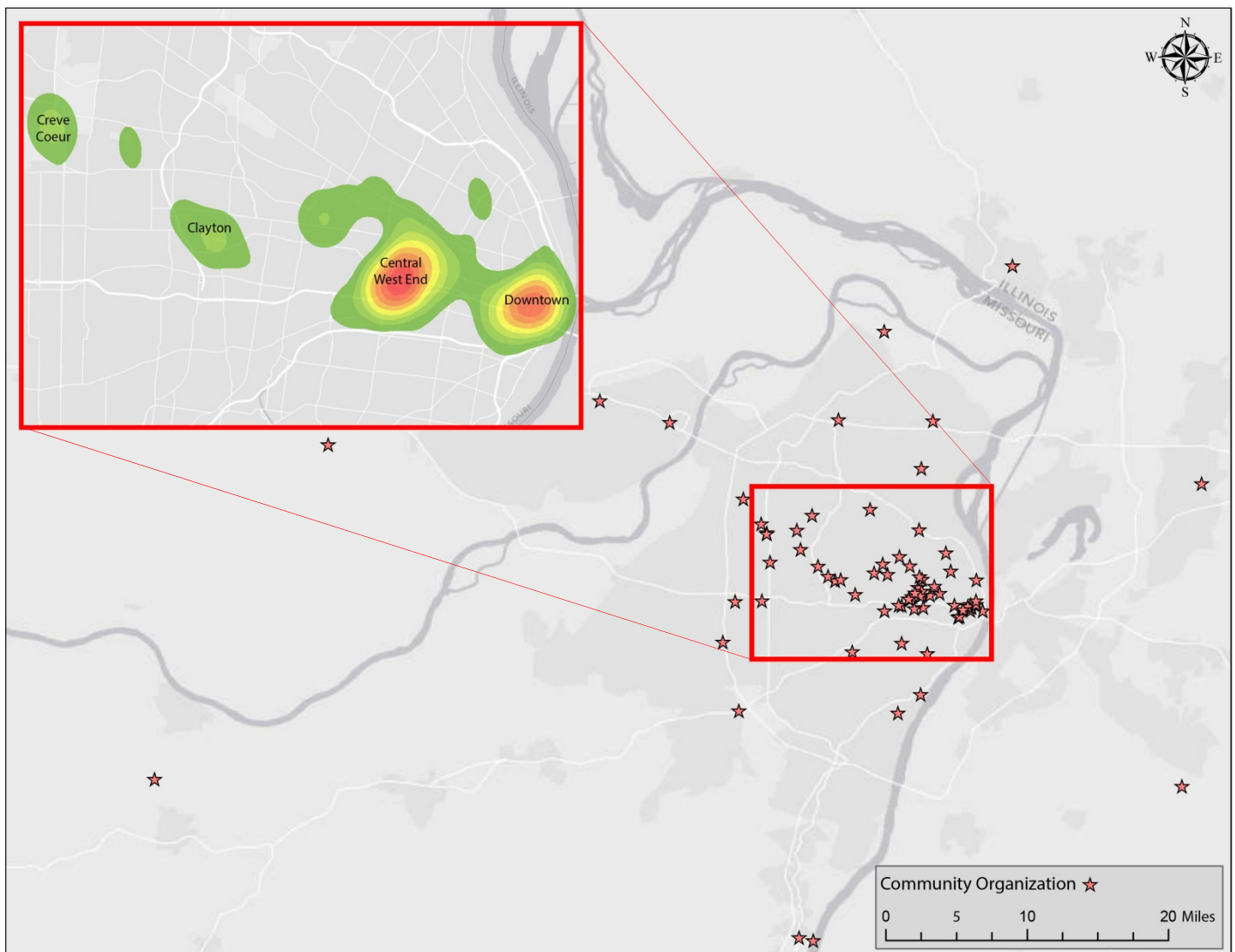
Table 1. List of community partners, type of organizations, and number of investigators who named them as a partner

| Community Organization	Type	#	Community Organization	Type	#
Alliance for Biking and Walking	ADV	1	Missouri Department of Corrections Division of Probation & Parole	GOV	1
Alton Memorial Hospital	HS	1	Missouri Department of Health & Senior Services	GOV	2
Alzheimer's Association - St. Louis Chapter	ADV	3	Missouri Foundation for Health	FOU	3
Ameren Corporation	HS	1	Missouri Social Services, Children's Division, St. Louis City & County	GOV	1
American Heart Association, Regional Chapter	ADV	1	Multiple Sclerosis Society Gateway Area Chapter	ADV	2
American Parkinson's Disease Association of Greater St. Louis	ADV	1	Murchison Tabernacle CME Church	FB	1
Barnes-Jewish St. Peters Hospital	HS	1	Muscular Dystrophy Association	ADV	1
Betty Jean Kerr People's Health Center	HS	6	Myrtle Hilliard Davis Comprehensive Health Center	HS	1
Boys & Girls Clubs of Greater St. Louis	EDU	1	National Children's Cancer Society	ADV	1
Cancer Support Community of Greater St. Louis	ADV	1	Nurses for Newborns	HS	1
Carpenters District Council of Greater St. Louis and Vicinity	ADV	2	PandemicPrep.org	HS	2
Carpenters Health and Welfare Trust Fund of St. Louis	FOU	1	Paraquad	HS	3
Chartwells School Dining Services	EDU	1	Parents As Teachers	EDU	1
Children's Discovery Institute	FOU	3	Planned Parenthood of the St. Louis Region & Southwest Missouri	HS	1
Christ Pilgrim Rest Missionary Baptist Church	FB	1	Prospect Hill Baptist Church	FB	1
Christian Hospital Northeast	HS	1	Prostate Cancer Community Partnership	HS	1
Christian Hospital Northwest	HS	1	Queen of Peace Center	HS	1
City of St. Louis	GOV	1	Ride on St. Louis	EDU	1
City of St. Louis Department of Health	GOV	1	Ritenour School District	EDU	1
Clayton Child Center	EDU	1	Special School District of St. Louis	EDU	1
Coleman Wright CME Church	FB	1	St. Louis Area Agency on Aging	ADV	4
Committed Caring Faith Communities	FB	3	St. Louis Children's Hospital	HS	1
Cystic Fibrosis Foundation	FOU	1	St. Louis City Juvenile Court	GOV	1
Exceptional Equestrians of the Missouri Valley, Inc.	EDU	1	St. Louis County Department of Health	GOV	1
Explore Transplant	HS	1	St. Louis Diabetes Coalition	HS	1
Faith Communities Joined for Health	FB	2	St. Louis Effort for AIDS	ADV	4
Faith Miracle Temple Church	FB	1	St. Louis Integrated Health Network	HS	1
Family Care Health Centers	HS	3	St. Louis Public Library	EDU	1
Family Resource Center	HS	1	St. Louis Public Schools	EDU	2
Gateway Immunization Coalition	HS	1	St. Louis Regional Breast Navigator Workgroup	HS	1
Grace Hill Health Centers	HS	2	St. Louis Science Center	EDU	1
Great Rivers Greenway	ADV	1	St. Louis Scott Gallagher Soccer Club	EDU	1
Healthier MO Communities	EDU	1	Supporting Positive Opportunities with Teens (The SPOT)	HS	1
Healthstreet	HS	2	Tabernacle of Life Church	FB	1
Hopewell Missionary Baptist Church	FB	1	The St. Louis American	EDU	1
Huntington's Disease Society of America	ADV	1	Therapeutic Horsemanship	EDU	1
International Institute of St. Louis	EDU	1	Trailnet	ADV	1
Jewish Community Center	FB	2	Washington University Cystic Fibrosis Family Advisory Board	ADV	1
Jewish Federation of St. Louis	FB	1	Washington University Pediatric and Adolescent Ambulatory Research Consortium (WUPAARC)	HS	1
Kellsie's Hope Foundation	FOU	1	West End Mt. Carmel Community Outreach Service	FB	1
March of Dimes - Missouri Chapter	ADV	1	Windsor C-1 School District	EDU	1
Metropolitan Police Department, City of St. Louis	GOV	1	Youth in Need Early Head Start & Head Start	EDU	1
Midwest Vapers Group	ADV	1	YWCA	EDU	1

ADV: Advocacy   EDU: Education   FB: Faith-Based   FOU: Foundation   GOV: Government   HS: Health Services

The majority of community organizations were identified by only one investigator, although 18 community organizations were identified by more than one investigator. Betty Jean Kerr People's Health Center was identified most often, by six investigators. St. Louis Area Agency on Aging and St. Louis Effort for AIDS each had four investigators identify them as community research partners.

Partner Characteristics

Organizations were coded into six categories based on their missions and types of research. Health Services and Educational organizations were the most common organization types (see Figure 4).

Figure 4. Organization types identified with the WUSTL/ICTS Investigators survey
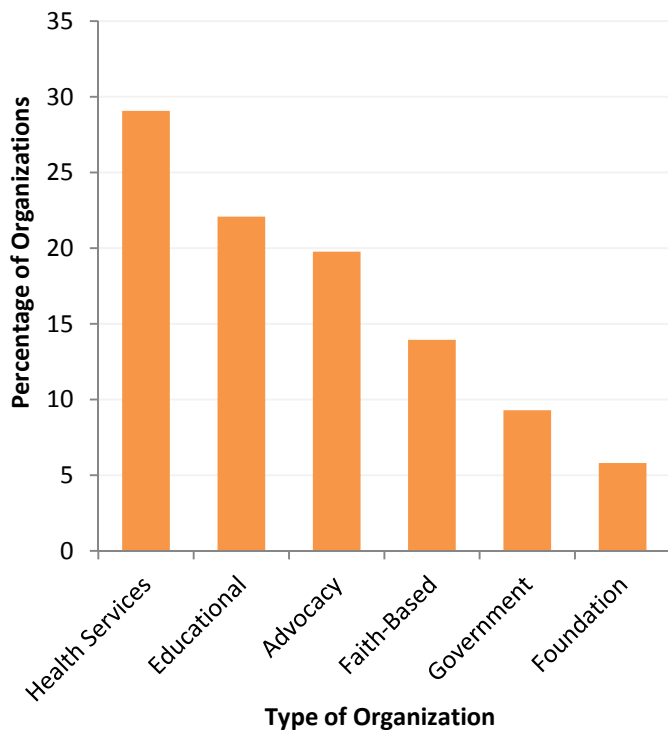
Research Topic Areas and Interests

Organizations reported research topics they were engaged in over the past 12 months as well as future research topic areas of interest. The topic areas were a combination of results from the 2009 Our Community,

Our Health conference[1] and the State of Missouri Health Disparities Report[2] from 2008.

Obesity & Physical Activity was the most common research topic that community organizations were engaged in and also had the highest interest for future research (Table 2). HIV/AIDS, Tobacco, and Sexually Transmitted Diseases were the three research topics that organizations expressed decreased interest in moving forward.

Table 2. What research topics are you currently engaged in, have done in the past, or may be interested in for the future?

Topic Area	Current or Past Research	Future Research
Obesity/Physical Activity	16.1% (10)	25.8% (16)
Mental Health	12.9% (8)	22.6% (14)
Violence & Injury Prevention	11.3% (7)	16.1% (10)
Cancer	11.3% (7)	12.9% (8)
Aging Populations	11.3% (7)	11.3% (7)
HIV/AIDS	11.3% (7)	9.7% (6)
Tobacco	11.3% (7)	8.1% (5)
Sexually Transmitted Diseases	11.3% (7)	8.1% (5)
Substance Abuse	8.1% (5)	12.9% (8)
Asthma	8.1% (5)	11.3% (7)
Hypertension/Blood Pressure	6.5% (4)	8.1% (5)
Immunizations	4.8% (3)	8.1% (5)
Chronic Lung Disease	4.8% (3)	6.5% (4)
Diabetes	3.2% (2)	11.3% (7)
Cardiovascular or Heart Disease	3.2% (2)	9.7% (6)
Allergy	3.2% (2)	6.5% (4)
Chronic Kidney Disease	1.6% (1)	6.5% (4)
Flu/Pneumonia	0.0% (0)	6.5% (4)

Refer to Appendix B for detail by organization type.

Community organizations were also asked about their broader research interests. Community-based research was the most common type of research currently engaged in and of interest for the future (see Table 3).

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[1] http://wustl-icts.vsstaging.com/mm/files/OCOHsurvey.pdf
[2] http://health.mo.gov/living/families/minorityhealth/pdf/DisparityReport.pdf

Table 3. What research types are you currently engaged in or may be interested in for the future?

Research Type	Current Research	Future Research
Community-Based	54.8% (34)	46.8% (29)
Health Services	19.4% (12)	32.3% (20)
Clinical Research	19.4% (12)	16.1% (10)
Laboratory-Based	6.5% (4)	4.8% (3)

Refer to Appendix B for detail by organization type.

Health Services research was the only type of research that increased from those who were currently engaged to those who were interested in that type of research for the future. Community organizations expressed a low interest in laboratory-based research.

Research Activities

Community organizations were involved in a wide variety of activities. Table 4 shows the research activities that have resulted from university-community partnerships in the past 12 months.

Table 4. For those research partnerships you have identified, what types of research activities have you conducted during the past 12 months?

Research Activity	Percentage (n)
Research Study	59.7% (37)
Grant Proposal	48.4 % (30)
Education/Training Activities	46.8% (29)
Presentation	27.4% (17)
Academic Publication	14.5% (9)
Press Release	11.3% (7)
Patent Application	3.2% (2)
Clinical/Policy Guidelines	3.2% (2)

Refer to Appendix B for detail by organization type.

More than half of the participating community organizations worked on a research study within the past 12 months and close to half of the community organizations worked on a grant proposal and/or training activities. Patent applications and clinical/policy guidelines had the lowest response at 3.2% each.

Collaboration

Collaboration patterns were examined in three different ways:

1. From WUSTL/ICTS investigators to the community organizations (WUSTL/ICTS investigator survey)
2. From community organizations to WUSTL/ICTS investigators (community organization survey)
3. From community organizations to other community organizations (community organization survey)

WUSTL/ICTS Collaboration with Community Organizations

In addition to the large overlap ICTS membership has with SCC and IPH within WUSTL, a small number of

ICTS members were from outside of WUSTL. External affiliate institutions were Barnes Jewish Healthcare (BJC), Saint Louis University (SLU), Southern Illinois University Edwardsville (SIUE), St. Louis College of Pharmacy (STLCOP), and University of Missouri St. Louis (UMSL).

Table 5 shows the distribution of collaboration from WUSTL/ICTS affiliated investigators over the six community organization types. Investigators affiliated with SLU focused most collaborations with health services organizations, while investigators affiliated with WUSTL had many collaborations with all types of organizations with the exceptions of foundations and government offices.

Table 5. Pattern of nominated community organizations by investigator affiliation and organization type

Institutional Affiliation	Advocacy	Educational	Faith-Based	Foundation	Government	Health Services	Total Nominations
WUSTL							
ICTS Only	5	10	10	2	2	4	**33**
ICTS & IPH	9	3	2	-	3	8	**25**
ICTS & SCC	1	-	-	2	-	4	**7**
ICTS, SCC & IPH	3	4	2	2	-	6	**17**
Non-WUSTL ICTS							
BJC	-	-	-	-	-	-	**0**
SLU	2	1	-	1	2	7	**13**
SIUE	1	-	-	-	-	-	**1**
STLCOP	-	-	-	1	-	-	**1**
UMSL	-	1	-	-	-	-	**1**
Total	**21**	**19**	**14**	**8**	**7**	**29**	

Community Organization Collaboration with WUSTL/ICTS

Community organizations were asked to rate their level of collaboration with each of the WUSTL/ICTS institutions on a scale of 0 (none) to 5 (full partnership), with an option to indicate "don't know" valued as 1. Figure 5 shows the pattern of collaboration as reported by the community organizations. Each of the non-

labeled small circles (nodes) represents a participating community organization, and the labeled nodes represent WUSTL/ICTS institutions. A line (link) between two nodes indicates that a community organization rated the level of collaboration at least as high as "don't know," indicating at least the possibility of having worked together. The size of the WUSTL/ICTS institution nodes is determined by the number of community organizations linked to them.
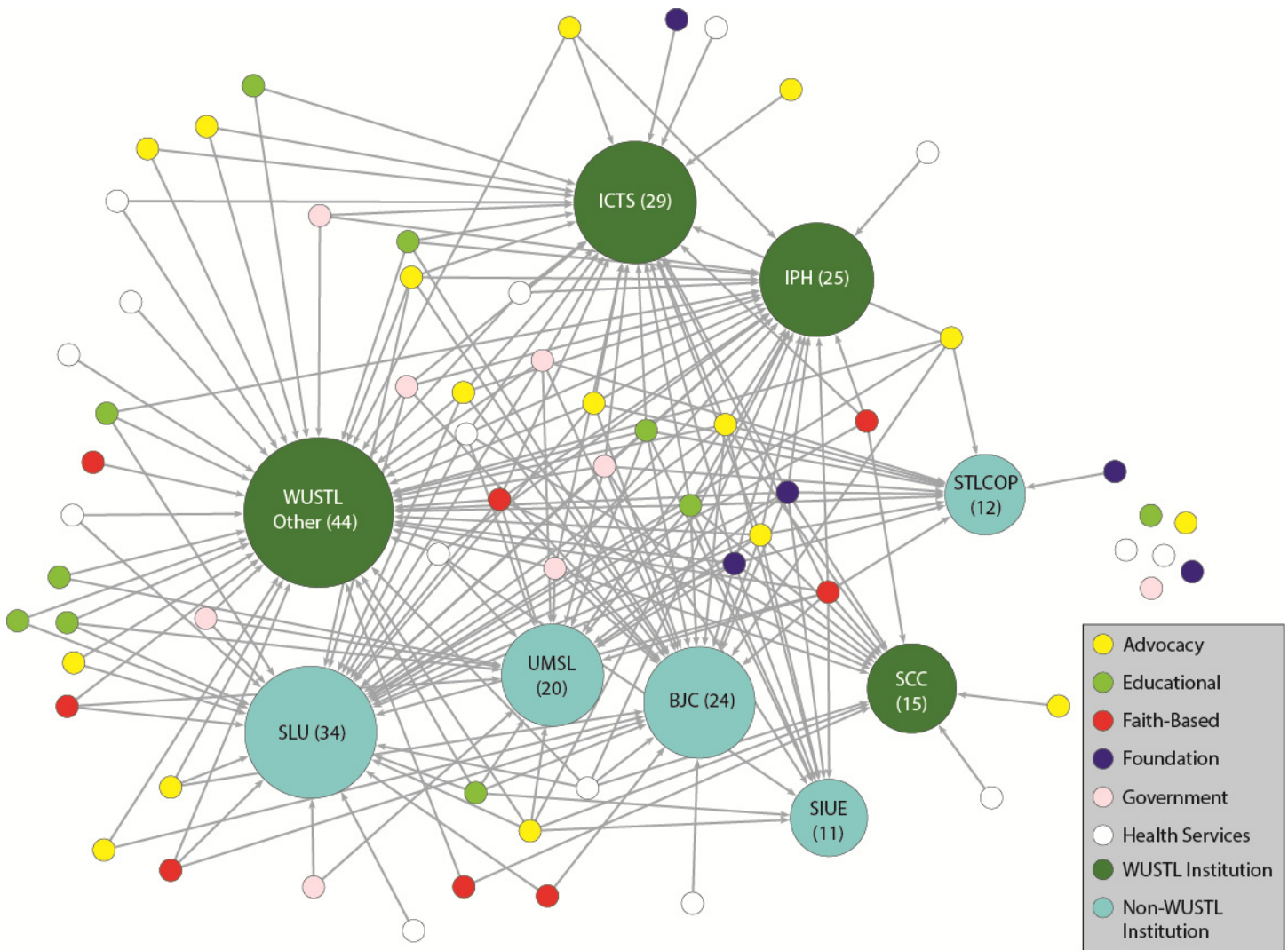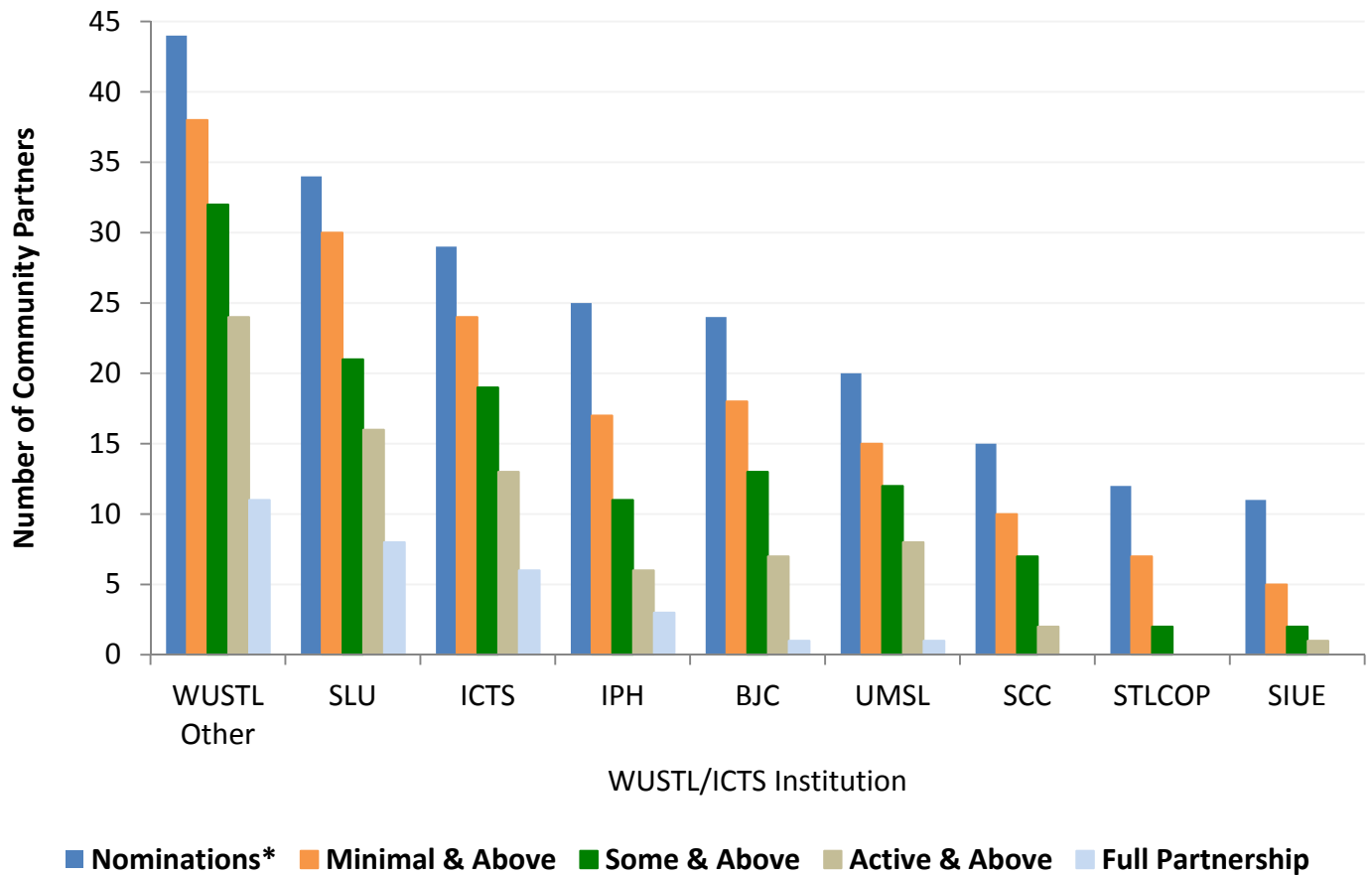
Figure 5 demonstrates a high level of activity, with community organizations reporting at least possible collaborations with an average of 3.45 WUSTL/ICTS institutions, and WUSTL/ICTS institutions receiving an average of 23.8 possible collaborations with community organizations. Community organizations were most likely to work with investigators with a WUSTL Other affiliation, followed by SLU, ICTS, IPH, and BJC (Figure 6). Figure 6 also demonstrates the distribution of partnership levels for each institution.

Note that a community organization's response to a level of involvement with a particular institution may not be with an investigator who responded to the WUSTL/ICTS Investigators survey. For instance, a

community organization working with SLU or UMSL may or may not have worked with the ICTS members from that institution.

Table 6 lists the average level of existing partnerships with each institution across all six community organization categories. Health services organizations tended to have the highest partnership levels, and foundations had the weakest. Community organizations reported the strongest relationships with WUSTL Other, and the weakest with SIUE. Particularly strong relationships were reported by health services organizations for WUSTL Other and SLU, by government offices for SIUE, and by foundations for ICTS.

Figure 6. Number of incoming nominations for each partnership level by institution

Number of Community Partners — WUSTL/ICTS Institution

Legend: ■ Nominations* ■ Minimal & Above ■ Some & Above ■ Active & Above ■ Full Partnership

*Including Don't Know

Table 6. Relationship strength averaged over each organization type for each institution

(1=Don't Know, 2=Minimal, 3=Some, 4=Active Partnership, 5=Full Partnership)

Organization Type	WUSTL Other	SLU	ICTS	UMSL	BJC	IPH	SCC	STLCOP	SIUE	Mean
Health Services	*4.13*	*4.00*	3.00	3.50	3.50	2.80	2.00	--	2.00	**3.69**
Government	3.50	3.83	3.00	3.80	3.50	2.25	3.00	2.50	*4.00*	**3.27**
Faith-Based	3.33	2.50	2.67	2.00	2.50	2.67	2.75	1.00	1.00	**3.11**
Advocacy	3.15	3.11	3.50	3.00	3.00	2.57	2.00	1.75	2.00	**3.08**
Educational	3.33	3.00	2.00	2.60	1.50	2.75	1.00	1.50	1.33	**2.93**
Foundation	2.00	2.50	*4.33*	1.00	1.00	1.00	2.50	1.67	1.00	**2.89**
Mean	**3.39**	**3.21**	**3.14**	**2.80**	**2.63**	**2.48**	**2.27**	**1.75**	**1.73**	**3.21**

Figure 7 displays the network of community organizations reporting full partnerships with at least one WUSTL/ICTS institution. Seven community organizations had full partnerships with more than one institution. These organization types include advocacy, education, government, and health services. Only one faith-based organization and one foundation reported a full partnership. A government organization had the most full-partnerships, working with four institutions. No community organizations reported full partnerships with SCC, SIUE, or STLCOP.

Figure 7. Full partnerships among community organizations and WUSTL/ICTS institutions
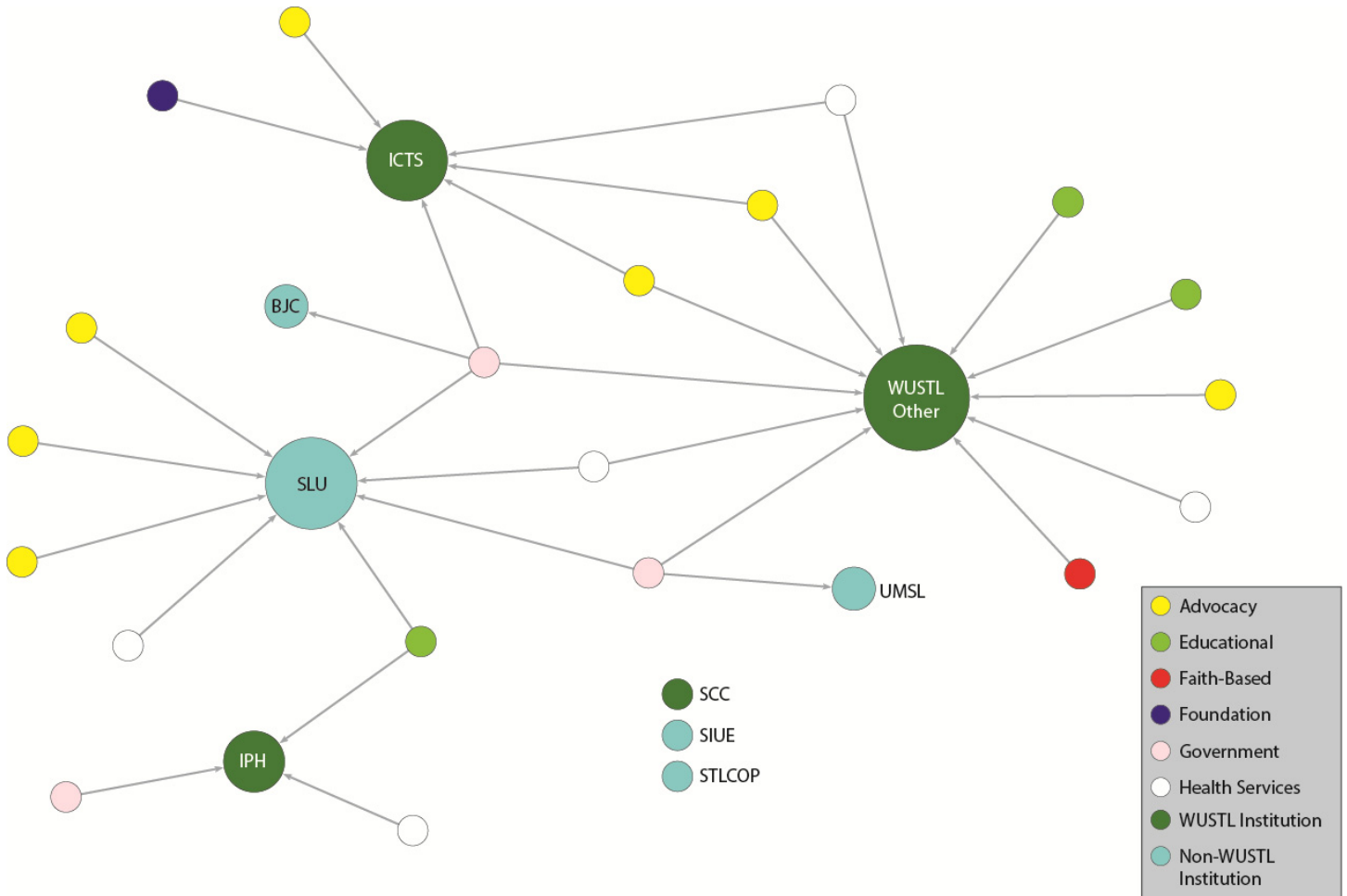
Community Partner Collaborations with other Community Partners

Community organizations were asked to identify up to five additional community organizations they worked closely with in the St. Louis metropolitan area. Figure 8 illustrates the partnerships between community organizations. Green nodes are additional community organizations named by participating organizations (yellow). Note that several participating organizations indicated working together. The non-connected nodes (isolates) in this network were participating organizations that did not indicate having additional community partners. Given the response rate of 72%, there are organizations that did not participate that could otherwise be considered isolates but are not included in this figure.

Figure 8. Community partner collaborations
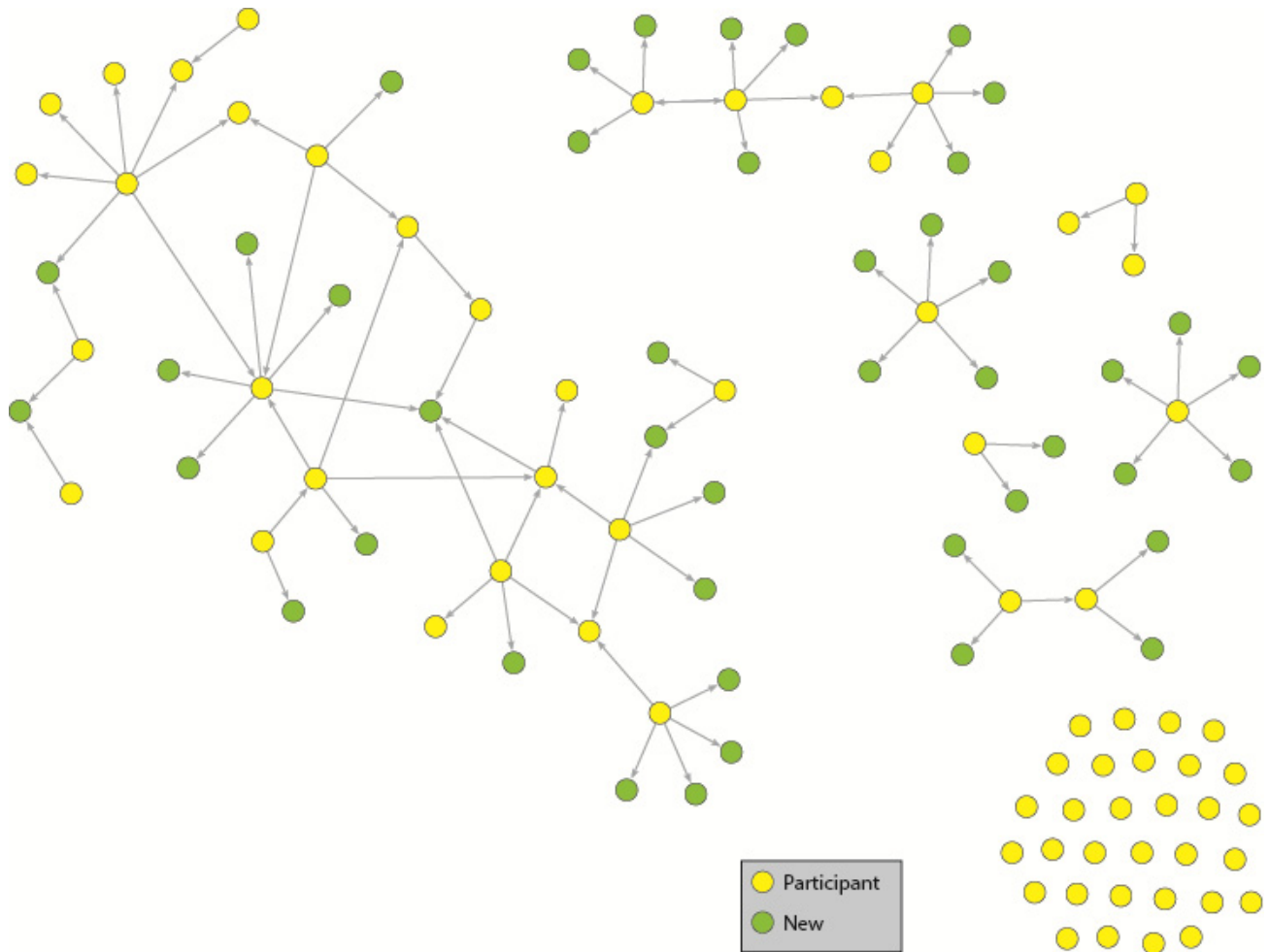
Challenges and Opportunities

The two most common barriers to research collaboration reported by community organizations were a lack of capacity and a lack of time (see Table 7). Lack of trust was the least common barrier to engaging in research. A more detailed breakdown of the barriers by organization type can be found in Appendix B.

Table 7. Which of the following factors impede your ability to engage in research with the partners listed before?

Barriers	Percentage (n)
Lack of capacity (funding, staff, etc.)	48.4% (30)
Lack of time	46.8% (29)
Organizational structure/bureaucracy	16.1% (10)
Unable to identify appropriate collaborator	6.5% (4)
Benefits of collaboration are outweighed by the costs	6.5% (4)
Research is a low priority	6.5% (4)
Lack of trust	1.6% (1)

Community organization respondents were asked an open-ended question for clarification about the barriers. One organization responded,

"Sometimes there is a disconnect between researchers and practitioners about the goals of the research project, which leads to expectations that haven't or can't be met."

Another organization responded,

"We are simply too busy to be as engaged and collaborative as we would like. The research and benefit derived is secondary to our core business objectives in the short-term ROI perspective."

Respondents were asked about the benefits of their research collaborations pertaining to four general categories: mission, quality, health, and productivity. Each question had a Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Figure 9 demonstrates that, on average, community partners were highly satisfied with their partnerships.

Figure 9. In general, our research collaborations have...

Respondents were given the opportunity to answer an open-ended question about the benefits of their research partnerships. Replies included:

"The Wash U team brings a different perspective to our program, and that fresh view is valuable in developing solutions that might not have been identified without their input."

"I would be like to see our partnership continue, even if the grant is not awarded for this project. I think together we can make a greater impact on communicating to students and parents and the effects of how their daily food choices affect their overall health at home and school."

"We love to have access to top researchers who are informed of best practices and can help us design effective programs and evaluation. It does need to be cost effective—we can't afford to spend a lot on evaluation that is too scientific and not applicable in program design now."

"Having national research grants awarded to local researchers helps our chapter when we engage with local supporters. It provides us with local examples of how the money that is donated to our chapter is being reinvested locally by our organization."

The majority of the qualitative responses were positive feedback about their research collaboration partners.

Opportunities for ICTS

Community organization respondents were asked three questions about the ICTS at the end of the survey: familiarity with ICTS, whether or not they had visited the ICTS website, and if they would like their contact information made available to ICTS investigators.

Nearly 47% of community organization respondents had not heard of the ICTS prior to taking the survey while 2.9% of community organizations reported working closely with ICTS members (see Table 8).

Table 8. How familiar are you with the Institute for Clinical and Translational Sciences (ICTS)?

Familiarity with ICTS	Percentage (n)
I have not heard of the ICTS prior to taking this survey	46.4% (32)
I have heard of the ICTS prior to taking this survey but I do not know its purpose	17.4% (12)
I am familiar with the ICTS and its purpose	21.7% (15)
I work closely with ICTS members	2.9% (2)

The ICTS constructed a new website in 2013[3] in order to increase its scientific reach and impact. This website provides an opportunity for broader dissemination and communication to community partners. Fewer than 15% of respondents had visited the website in the last year (Table 9).

Table 9. Have you visited the ICTS website in the past 12 months?

Visited Website	Percentage (n)
Yes	14.8% (9)
No	85.2% (52)

The Tracking and Evaluation team will monitor website traffic and experiment with web analytics to track changes in website activity.

Finally, respondents were asked if they would like their contact information made available for ICTS members to contact them about research opportunities in the future.

While most community organization respondents were not familiar with the ICTS and had not visited the

website, they were interested in being contacted by ICTS members for future research collaborations (Table 10).

Table 10. Would you like to have your name and contact information available to ICTS members so that researchers can contact you about future research opportunities?

Contact Information	Percentage (n)
Yes	75% (45)
No	25% (15)

Limitations

Since the project was the first of its kind and exploratory in nature, there were some inherent limitations. Limitations arose due to the uniqueness of the project—surveying two separate groups of individuals but referring to the organizations instead of individuals in each survey. This could be particularly difficult for the community organizations since they may not know their research partners' institution affiliations.

Other limitations include:

Low response rate: The WUSTL/ICTS Investigators survey had only a 41% response rate; close to 900 people did not indicate whether or not they conducted community-engaged research in the past 12 months.

Likely missing existing partnerships: This is most likely due to the low response rate from the first survey. Had more ICTS, SCC, and IPH members participated, additional community partners would have been included in the network.

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[3]http://icts.wustl.edu/

CONCLUSIONS

Summary of Key Findings

- A small number (4%) of ICTS, SCC, and IPH investigators reported community research partnerships.
- Investigators partnered with 86 community organizations across a wide variety of research topics.
- Six types of community organizations were identified: Health Services, Educational, Advocacy, Faith-Based, Government, and Foundation.
- Current research topics commonly included obesity, mental health, and violence & injury prevention.
- Community organizations anticipated increasing interest in health services research.
- Community organizations were mostly clustered into two locations: in the Central West End neighborhood surrounding the Washington University School of Medicine and downtown St. Louis.
- Research relationships were strongest and most frequent with health services organizations, and weakest and least frequent with foundations.
- Lack of capacity (funding, staff) and lack of time were the two biggest reported barriers to community-engaged research.
- Nearly half of the community organizations stated they had not heard of the ICTS prior to taking the survey.
- Despite limited awareness of ICTS among community organizations, partners had high interest in getting involved in future research.

Discussion

Funding and time were the biggest barriers toward collaboration as indicated by the community organizations. With the information gained through this project, the ICTS is now aware of research interests of community organizations and can be more strategic in facilitating collaboration between university investigators and community organizations that have similar interests.

Nearly half of all participating community organizations had not heard of the ICTS prior to taking the survey. This suggests an opportunity and need to market the ICTS to a broader audience. CCER can view upcoming activities as opportunities to raise the visibility of ICTS and consider disseminating the new ICTS website among community organizations.

APPENDIX A: ADDITIONAL FIGURES

Figure 1. Would you like to have your name and contact information available to ICTS members so that researchers can contact you about future research opportunities?
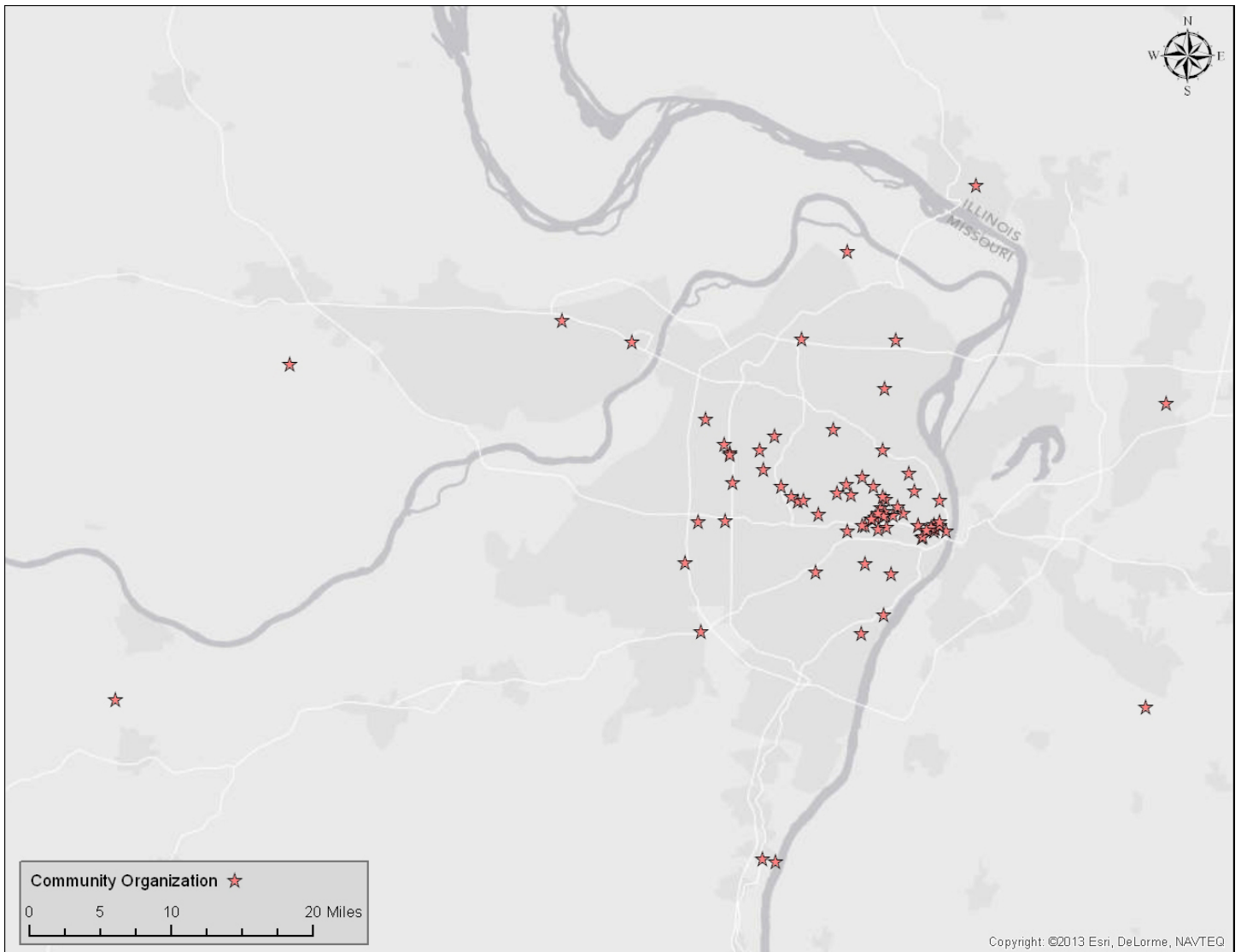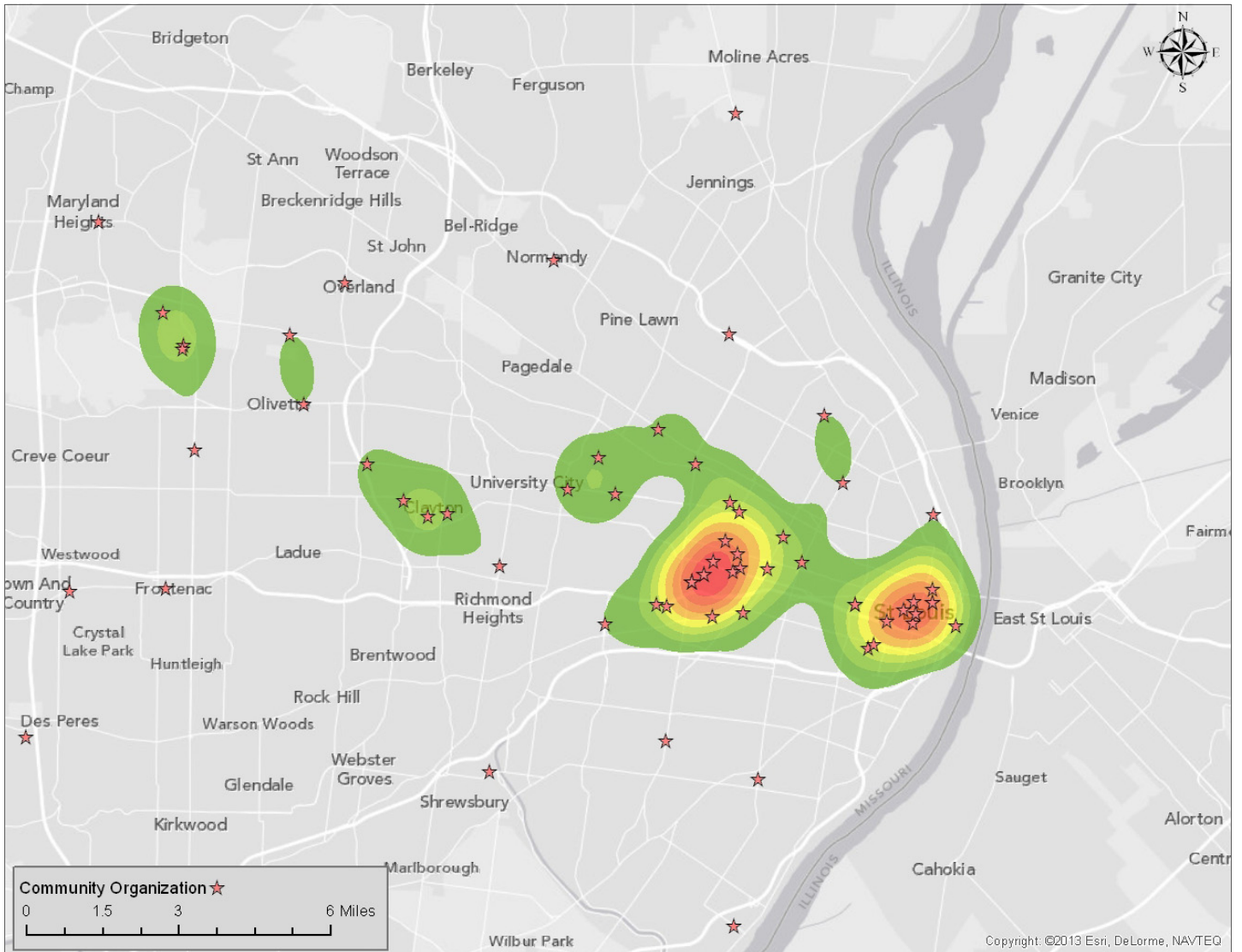
Figure 2. WUSTL community organization heat map

APPENDIX B: ADDITIONAL TABLES

Table 1a. What research topics are you currently engaged in or have done in the past?

Topic Area	Current or Past Research	Advocacy	Educational	Faith-Based	Foundation	Government	Health Services
Obesity/Physical Activity	16.1%	2	1	0	1	3	2
Mental Health	12.9%	0	2	0	1	3	0
Violence & Injury Prevention	11.3%	2	1	0	2	1	2
Cancer	11.3%	0	3	0	0	1	0
Aging Populations	11.3%	1	3	0	0	0	1
HIV/AIDS	11.3%	0	2	0	2	2	0
Tobacco	11.3%	0	2	1	2	1	0
Sexually Transmitted Diseases	11.3%	0	1	0	3	2	0
Substance Abuse	8.1%	0	1	0	2	1	0
Asthma	8.1%	1	1	0	1	1	1
Hypertension/Blood Pressure	6.5%	1	1	0	0	1	1
Immunizations	4.8%	0	0	0	1	1	0
Chronic Lung Disease	4.8%	0	1	1	0	0	0
Diabetes	3.2%	0	0	0	0	1	0
Cardiovascular or Heart Disease	3.2%	1	0	0	0	0	1
Allergy	3.2%	0	0	0	1	0	0
Chronic Kidney Disease	1.6%	0	1	0	0	0	0
Flu/Pneumonia	0.0%	0	0	0	0	0	0

Table 1b. What research topics are you interested in for the future?

Topic Area	Future Research	Advocacy	Educational	Faith-Based	Foundation	Government	Health Services
Obesity/Physical Activity	25.8%	2	3	4	0	3	4
Mental Health	22.6%	3	4	1	0	3	3
Violence & Injury Prevention	16.1%	1	4	2	0	3	0
Cancer	12.9%	2	1	1	0	0	4
Aging Populations	11.3%	2	1	3	0	1	0
HIV/AIDS	9.7%	0	1	1	0	2	2
Tobacco	8.1%	1	2	0	0	1	1
Sexually Transmitted Diseases	8.1%	0	2	1	0	1	1
Substance Abuse	12.9%	1	3	1	0	2	1
Asthma	11.3%	1	1	2	0	1	2
Hypertension/Blood Pressure	8.1%	0	1	2	1	0	1
Immunizations	8.1%	1	1	2	0	1	0
Chronic Lung Disease	6.5%	1	1	1	0	0	1
Diabetes	11.3%	1	1	3	1	0	1
Cardiovascular or Heart Disease	9.7%	1	1	3	1	0	0
Allergy	6.5%	0	1	3	0	0	0
Chronic Kidney Disease	6.5%	0	1	2	0	0	1
Flu/Pneumonia	6.5%	0	1	2	0	0	1

Table 2a. What research types are you currently engaged in?

Research Type	Current Research	Advocacy	Educational	Faith-Based	Foundation	Government	Health Services
Community-Based	54.8%	10	5	6	1	5	7
Health Services	19.4%	3	2	2	0	2	3
Clinical Research	19.4%	3	2	1	3	1	2
Laboratory-Based	6.5%	2	0	1	1	0	0

Table 2b. What research types are you interested in for the future?

Research Type	Future Research	Advocacy	Educational	Faith-Based	Foundation	Government	Health Services
Community-Based	46.8%	9	6	3	0	3	8
Health Services	32.3%	6	4	4	0	3	3
Clinical Research	16.1%	4	2	1	0	1	2
Laboratory-Based	4.8%	1	0	1	0	1	0

Table 3. For those research partnerships you have identified, what types of research activities have you conducted during the past 12 months?

Research Activity	Percentage	Advocacy	Educational	Faith-Based	Foundation	Government	Health Services
Research Study	59.7%	9	7	5	2	5	9
Grant Proposal	48.4 %	10	4	2	2	4	8
Education/Training Activities	46.8%	10	5	4	1	4	5
Presentation	27.4%	7	2	4	0	1	3
Academic Publication	14.5%	4	1	1	0	1	2
Press Release	11.3%	2	1	2	0	1	1
Patent Application	3.2%	0	0	1	0	1	0
Clinical/Policy Guidelines	3.2%	1	0	0	0	1	0

Table 4. Percentage of community organizations within each organization type reporting barriers

Barriers	Advocacy	Educational	Faith-Based	Foundation	Government	Health Services
Lack of capacity (funding, staff, etc.)	63%	50%	25%	20%	38%	60%
Lack of time	56%	60%	38%	20%	38%	47%
Organizational structure/bureaucracy	25%	10%	13%	0%	38%	7%
Unable to identify appropriate collaborator	13%	0%	13%	0%	0%	7%
Benefits of collaboration are outweighed by the costs	13%	20%	0%	0%	0%	0%
Research is a low priority	13%	10%	0%	0%	13%	0%
Lack of trust	0%	0%	0%	0%	0%	7%