

## Colorado Immersion Training in Community Engagement: Because You Can't Study What You Don't Know

Linda Zittleman, MSPH<sup>1,2</sup>, Leslie Wright, MA<sup>1,3</sup>, Charlene Barrientos Ortiz<sup>1,4</sup>, Candace Fleming, PhD<sup>5</sup>, Crystal Loudhawk-Hedgepeth, MEd<sup>1,5</sup>, Julie Marshall, PhD<sup>1,4</sup>, Lorenzo Ramirez<sup>1,6</sup>, Michele Wheeler, MA<sup>1,7</sup>, and John M. Westfall, MD, MPH<sup>1,2</sup>

(1) Colorado Clinical and Translational Sciences Institute Community Engagement Core; (2) University of Colorado Anschutz Medical Campus, School of Medicine, Department of Family Medicine; (3) KPCO Institute for Health Research, Kaiser Permanente Colorado; (4) University of Colorado Anschutz Medical Campus, Colorado School of Public Health; (5) University of Colorado Anschutz Medical Campus, Centers for American Indian and Alaska Native Health; (6) Latinos Using Cardio Health Actions to Reduce Risk; (7) 2040 Partners for Health

Submitted 6 August 2012, revised 21 January 2013, accepted 28 March 2013.

### Abstract

**Background:** Community engagement (CE) has become a major element in medical research. In alliance with the goals of the Clinical and Translational Sciences Award program, Colorado Immersion Training in Community Engagement (CIT) is a community-campus partnership that aims to introduce an expanded pool of researchers to community-based participatory research (CBPR) and CE.

**Objectives:** To describe CIT components and preliminary results.

**Methods:** CIT attempts to support a change in the research trajectory of academic health researchers, program developers, and graduate students toward CE. The program occurs on campus and in six community settings: Urban African American, urban Asian and refugee, urban Latino, urban American Indian/Alaska Native, rural northeast Colorado, and rural San Luis Valley. Components include a 4-week Directed Reading, a seminar on CBPR, 4-day community immersion, reflection, and 6-month support. Evaluation describes recruitment, implementation, and participants' understanding of CBPR and skills post-training.

**Results:** Fifty-eight people have participated. A comprehensive curriculum was developed to address (1) principals of CBPR, (2) health disparities, (3) listening to community, (4) self-reflection, and (5) engagement tools. Community immersions expose participants to a community's culture and opportunities to discuss health issues with a range of community members. Local "community guides" enhance participants' experience. Of the first two cohorts, 90% changed the way they plan to approach their research, 94% changed how they viewed community involvement in research, and 77% learned new skills to help engage communities in research.

**Conclusions:** CIT applies to and positively impacts researchers from a variety of disciplines. CIT creates opportunities for long lasting partnerships between researchers and communities.

### Keywords

Training, community engagement, immersion, community-based participatory research, community-campus partnerships, clinical and translational science award

Engaging community partners in health research is an important component of conducting relevant and effective health research and is essential to translating research into clinical practice. CE represents a cultural shift in how some individual researchers, departments, and institutions approach and conduct their research. There are many ways in which communities can be engaged in research. CIT

is a community-campus partnership designed to expand the pool of scientists and researchers who have the knowledge and skills to effectively and respectfully partner with communities for improved translational research.

CE is an important element of the Clinical and Translational Sciences Awards from the National Institutes of Health (NIH). The Clinical and Translational Sciences Awards

is a major initiative of the NIH Roadmap to expedite the translation of new discoveries into everyday practice.<sup>1-3</sup> CIT is housed in the Colorado Clinical and Translational Sciences Institute (CCTSI) Community Engagement Core and is in alliance with the goals of the CCTSI to reduce geographic, cultural, and socioeconomic health disparities in Colorado. The CCTSI partnering communities and researchers identified the need to provide more in-depth training to accelerate the progress toward full CE. CIT helps to address this need by creating an infrastructure for educating and training academic researchers and their research teams in research that has CE as its foundation.

The program was funded by a NIH American Reinvestment and Recovery Act stimulus grant and was informed by the Urban Immersion Program at the Research Center of Excellence on Minority Health Disparities at the University of Pittsburgh. Three members of the CIT program staff participated in the Urban Immersion program in Pittsburgh. The experience enforced the concept of immersion training is a full-sensory education experience, and several key values and strategies were observed and incorporated into CIT, including classroom, observational, and experiential learning; dialogue; self-awareness; and reflection.

Colorado's immersion program consists of CIT, which takes junior faculty and research team members interested in learning about CE out of their offices and into the community; an Academic Mini-Immersion Event, which brings community members to the University of Colorado Anschutz Medical Campus; and the One-Day Student Field Experience for graduate students hosted by CCTSI Community Liaisons.

This manuscript describes the CIT program development and structure, participants, educational and experiential components, and results from participant 6-week and 6-month follow-up surveys.

## METHODS

The framework CIT uses for building and sustaining CE is based in CBPR, which can be defined as, "A collaborative process that equitably involves all partners in the research process and recognizes the unique strengths that each brings. CBPR begins with a research topic of importance to the community with the aim of combining knowledge and action for social change to improve community health and

eliminate health disparities."<sup>4</sup> CIT views CBPR along a broad continuum, aiming to provide participants with a breadth of opportunities to begin the process and journey of engaging communities in important health research. CIT takes participants through a series of experiences that aim to create and enhance their understanding of CE in research and CBPR; increase awareness of health disparities; teach fundamental CBPR skills, such as effective listening, question asking, and identifying opportunities to working with communities along the research continuum as they begin relationship building; provide a variety of printed and online resources, including the principals of CBPR and examples of CBPR; and improve cultural confidence to enable researchers to work with a range of communities and develop functional partnerships.

## Partner Communities

CIT partners with six unique cultural communities that each offer a community "track" in which participants can focus their CIT training. Each track is hosted by a CCTSI partner that has a substantial history with a unique population. Four to six tracks are offered each year, with four slots available per track. Enrollment in each track is limited to four people, with a rare exception of five, to create an environment conducive to meaningful, small group conversations and interactions among participants, track leaders, and the community members that meet with participants during the program. Some researchers have a specific community with which they wish to work during their professional career and request the corresponding track. Others desire the basic education and skills to help them engage communities and are placed in tracks to ensure a full cohort of researchers in each track. Table 1 shows the current tracks and host organizations.

## Staff

CIT staff consists of university faculty, CCTSI community liaisons, and leaders from the partner organizations. Combined, the staff offers years of experience with CBPR and CE methods and knowledge of and connections in the focus communities. Staff includes several formal positions, each with unique capabilities and roles. The director and co-director provide overall leadership, vision, coordination, and evaluation. A track coordinator from each partner community helps to guide program development, evaluation, and the

implementation of individual track activities. CCTSI community liaisons, one from each partner community, work closely with their respective track coordinator and directors to develop and execute track-specific activities. Liaisons are experts in their community and give the program valuable breadth and depth with their insider information and experiences. Liaisons include employees of community-based organizations or the university as well as independent contractors. The track coordinator and liaison for each track identifies and hires up to four local residents from the community to serve as community guides for the week intensive component of the program. Community guides are well-rooted in their communities. Although some are considered community leaders, this is not a required characteristic of a guide. The community guides influence several aspects of the program content. Guides participate in the online posts and help to suggest and confirm track-specific readings for the directed reading portion of the program. They are essential to the successful planning of “week intensive” activities in the community, working closely with the track coordinators and liaisons to both identify and contact people, sites, and events to include in the itineraries. While providing important logistic tasks, guides are local story tellers who give participants a deep, diverse, and real-world experience.

### Components

CIT is a 6-month program that uses multiple learning tools to achieve program goals, including readings, classroom time, observation, hands-on experience, dialogue, and personal reflection. There are five major program components. Examples of many of the materials described below can be found at the CCTSI Community Engagement Core website at: [cctsi.ucdenver.edu/COMMUNITYENGAGEMENT/Pages/default.aspx](http://cctsi.ucdenver.edu/COMMUNITYENGAGEMENT/Pages/default.aspx) under “Resources.”

*Directed Reading and Online Discussion.* The CIT curriculum begins with 4 weeks of directed reading. A set of core readings explores the history of CE and CBPR, case studies, exercises to assess readiness and general fit to conduct community-engaged research,

Table 1. Colorado Immersion Training in Community Engagement Staff, Tracks and Partner Organizations			
Track	Host Organization	Track Staff (Coordinator-Liaison Team)	Geographic Region
African American	2040 Partners for Health	Director of 2040 Partners for Health and CCTSI Liaison for urban African American communities (employed by organization)	Central and northeast Denver, focus on northeast Park Hill
American Indian Community	Centers for American Indian and Alaska Native Health	University of Colorado faculty within host organization and CCTSI Liaison for AIAN communities (university employed)	Denver metropolitan area
Latino Community	Latinos Using Cardio Health Actions to Reduce Risk (LUCHAR)	University of Colorado faculty and CCTSI Liaison for urban Latino communities (independent contract)	Metro Denver, with focus on northwest, west, and far east Denver/west Aurora
Asian and Refugee	Colorado Alliance for Health Education and Practice	Director of host organization and CCTSI Liaison to Asian/Refugee communities (independent contract)	Denver metropolitan area
Eastern Colorado	High Plains Research Network	University of Colorado faculty/Associate Director of host organization and CCTSI Liaison (university employed)	Far northeast Colorado, with base in Sterling
San Luis Valley	Rocky Mountain Prevention Research Center	University of Colorado faculty/director of host organization and CCTSI Liaison for San Luis Valley (university employed)	South-central Colorado, with base in Alamosa
Program Level		Director: CCTSI Community Engagement Core Director Co-Director: CCTSI Community Engagement Core Program Staff	

AIAN, American Indian/Alaska Native; CCTSI, Colorado Clinical and Translational Sciences Institute.

and reflection on implicit bias. CIT staff members were invited to propose core readings. Participants also receive a set of readings specific to their track, as selected by the track teams. Journal articles, books, videos, poems, novels (often written by local authors), and community demographic summaries help participants to explore the health, social, historical, and cultural landscape of the track community. Participants also receive a hardcover CIT journal to use throughout the CIT program to encourage self-reflection, using the journal to document questions, reactions, and self-observations.

During this month of reading, participants also join a CIT group blog to begin conversations with program staff and other participants about the readings and to share questions or comments. The CIT blog is hosted as an online, private group where participants can safely ask questions and discuss the readings.

*CBPR Seminar.* After the directed reading, participants attend a 1-day seminar. The seminar serves as the kick-off for the “week intensive” and is facilitated and taught by members of the CIT staff. The seminar is the first time all participants and program staff meet together in person. Chairs in the seminar room are arranged in a circle without desks to facilitate informal learning. During the seminar, participants receive an overview of CBPR, including the definition and principles of CBPR and the variety of forms CBPR can take. Interactive discussions also address asset mapping, ways to engage communities along the research continuum, and national- and state-level health disparities. The “What Not to Wear” panel is a popular session that consists of community members who have partnered with academic researchers. Panelists share their stories of what worked and what did not work well in their community–researcher partnership and serve as a valuable resource for participants.

*Week Intensive.* For the next 4 days, the week intensive shifts the program from readings and intellectual discussions to experiencing the community hands on. Participants are given the opportunity to witness and learn in a dynamic environment and to lay the foundation for new relationships. The itineraries for the week intensive are developed by each track coordinator-liaison team. Community guides may also contribute to itinerary development. Activities take participants on a journey through a community’s health and health care, history, environment, industry and economic

forces, education, politics, and culture. The week may also include community events (health or other), community or patient advisory council meetings (with local community members), and research-focused meetings with community partners doing CBPR projects with the university. During the week intensive, participants learn firsthand the local stories, often from community members whom they would otherwise not meet or would not be able to access. The week intensive takes researchers out of their comfort zones. It is exhausting, invigorating, and personal. Whenever possible, time is carved out for participants to journal and/or discuss the day’s experiences with the group to help process information and reflect on their own self-observations.

*Reflection and Celebration.* To wrap up the week intensive, participants and staff come together for a half-day of reflection and celebration. This session is an opportunity for participants to share experiences, ask questions, and decompress. The CIT directors set the tone for the session by acknowledging the physical and mental energy participants and the CIT team have expended over the past week and validating the importance of both cognitive and emotional responses participants may have experienced. Attendees are asked to share their thoughts on the following guiding questions, in addition to other comments they chose to share: What was a highlight for you during this experience? What did you find challenging? What surprised you? and How did you experience the CBPR principles? Conversation is facilitated by passing a talking stick among attendees. Only the person holding the stick is allowed to speak, which ensures that everyone has a chance to speak and reduces the opportunity for a few people to dominate the conversation. Participants, community guides, and track teams all have the opportunity to speak. The session provides a useful transition from exploring and reflection to applying new knowledge and skills in participants’ day-to-day lives.

*Six-Month Follow-Up.* Over the next 6 months, participants continue to utilize the knowledge and resources accessible through the CIT team. Track liaisons interact regularly with participants via phone, email, or in person every 3 weeks, or as needed. Liaisons facilitate partnership development by reconnecting participants with community members they met during the week intensive and helping participants to make new connections. Liaisons coordinate meetings with CIT directors and track teams to help cultivate and develop

new studies ideas. CIT team members also direct participants to funding opportunities and offer grant writing support, ranging from helping participants refine a project's research question and aims to reviewing drafts of applications. The program also hosts several events related to CE and CBPR, individual tracks may convene, and participants are informed of other CE-related activities on campus or in the community.

### Recruitment

Participants apply for the program by completing the CIT Interest Form. The interest form includes program dates and asks for the applicant's academic institution, home department, title/role, areas of research, contact information, and preferred community tracks. The program is announced via campus-wide emails, distribution of the program brochure by individual university leaders throughout the campus and at CCTSI partner organizations, and presentations by staff at seminars and grand rounds to several target groups.

Recruitment is done on a first-come, first-served basis. Interested candidates are first screened by the program co-director, who provides an overview of the program, learns the applicant's motivation for participating, answers questions, and makes an initial assessment of the applicant's research goals and professional development. The liaison consultant along with a member from one or two of the applicant's preferred track teams conduct a second interview, guided by the Intake Interview Form. This interview focuses on the applicant's background, how CIT fits into their professional goals, and types of people or places they would like to experience during week intensive. Selected candidates are matched with one community track based on research and professional development interests and fit with the host organization's research expertise and networks.

### Cost

There is no application or participation fee. The program was originally grant-funded with a budget of approximately \$100,000 per year. Key budget items include personnel, compensation for community guides, compensation for organizations and community members contributing to the week intensive (as determined by each track), mileage, meals, lodging accommodations for the rural track participants, curriculum materials, and follow-up activities. To sustain the

program following its original funding, the CCTSI has chosen to support the program as a core component of its work in CE. In future years, CIT will offer two to four tracks per year to reduce cost while maintaining a sustainable, quality program.

### Evaluation

Follow-up participant surveys are conducted at 6 weeks and 6 months after the week intensive to evaluate process measures and participant outcomes. The 6-week follow-up survey is administered via an online, anonymous survey and asks five questions pertaining to the week intensive experience. Questions address the degree to which the week intensive experience met their expectations, provided potential to improve their research, and allowed them to meet new contacts that they would like involved in research. The 6-month follow-up survey expands on this to evaluate specific program components, such as directed readings and follow-up support, and the impact of the training on career development, including grant ideas and applications. Quotes are also collected during the reflection session and from written summaries submitted by participants after the week intensive to describe program impact.

This manuscript describes program methods and evaluation and was not subject to IRB approval.

### RESULTS

Over 3 years, a total of 14 tracks have been offered. A total of 58 people have participated, including university faculty, post-doctoral students, research team members, graduate students, and program coordinators. As shown in Table 2, participants represent a range of institutions and disciplines. Although most are affiliated with the University of Colorado Anschutz Medical Campus, several trainees from partner organizations in the Denver metro area as well as institutions around the country have participated.

Feedback from participants indicates strong emotional and intellectual outcomes from the CIT experiences. At the time of submission, 6-week survey results from 14 tracks and 6-month survey results from 10 tracks were available. As shown in Table 3, the vast majority of participants report strong benefit from the week intense program component. Responses indicate that participants overwhelmingly agree or strongly agree that the week intensive met their expectations



(94%), provided potential to improve their research (89%), and provided contacts they would like to involve or partner with in their research (77%). Results from the 6-month follow-up demonstrate that the CIT program positively impacts participants on several levels, with participants reporting that they agree or strongly agree that they gained new skills (86%) and resources (86%) to engage communities in research and new insights into health disparities (71%). Skills reported by participants include: “How to ask effective questions when working with community members” and “Listen more, talk less!” The CIT also changed how participants approach their

research (93%) and how they view community’s involvement in research (100%), as illustrated by the following quotes:

I see the community as less a partner and more the leader in research.

I am now much more aware of the importance of involving the community early in the research process.

[CIT] increased my awareness of the need to enter the partnership with a focus on the needs of the community agency rather than my personal research goals.

The most commonly reported new resources reported were access to the community liaisons, community guides, local contacts, and CIT staff, and the access to academic and community-based networks provided by each group. As one participant reported: “Community liaisons and guides. They have taught me more than any classroom.”

During the reflection and celebration component, many participants described a new awareness of the history of ethnic and minority communities and the impact of health disparities on the individual and community. They attributed much of this learning to the direct contact with community members and organizations. Participants spoke of individual community members that shared personal stories and taught

**Table 2. CIT Participant Characteristics (N = 58)**

Characteristic	n	(%)
<i>Degree</i>		
PhD	15	(25.9)
MD	14	(24.1)
MA	7	(12.1)
MPH	7	(12.1)
BA/BS	5	(8.6)
RN	2	(3.4)
DDS, JD, MBA, MEd, MS, NP, PharmD, PsyD	1 each	(1.7)
<i>Affiliation</i>		
University of Colorado Anschutz Medical Campus	34	(58.6)
University of Colorado Denver	7	(12.1)
Denver Health Medical Center	6	(10.3)
University of Pittsburgh	3	(5.2)
Colorado Department of Public Health and Environment	2	(3.4)
Kaiser Permanente Colorado, Salud Family Health Center, University of California San Francisco, University of Colorado Boulder, University of Kansas, University of Virginia	1 each	(1.7)
<i>Gender</i>		
Female	43	(74.1)
Male	15	(25.9)
<i>Track</i>		
Urban Latino	13	(22.4)
Urban African American	12	(20.7)
Rural San Luis Valley	11	(19.0)
Urban American Indian and Alaska Native	10	(17.2)
Rural Eastern Colorado	8	(13.8)
Urban Asian/Refugee	4	(6.9)

**Table 3. CIT Follow-up Survey Results From Cohorts 1 and 2 (N = 44)**

Question	Agree or Strongly Agree (%)
<i>6-Week follow-up (n = 35)</i>	
Met my expectations.	94
Provided potential for me to improve my research.	89
Provided contacts that I would like to be involved with my research.	77
<i>6-Month follow-up survey (n = 31)</i>	
Changed my approach to research.	90
Changed how I view community’s involvement in research.	94
Taught me skills to help me engage communities in my research.	77
Provided resources to help me engage communities in my research.	90
Gave me new insights about health disparities.	87

important lessons about their family, culture, and community.

Twenty-one local residents have served as community guides for CIT. Of these, 15 returned to work with CIT for 2 or more years. Community guides shared their surprise that so many academic researchers were truly committed to helping their community develop and implement new programs to improve health. As one guide said: “Truth be told, this event is a highlight for me each year. Gives me hope for the future that people in this room give a damn about what happens to my own community.” They also reported learning more about their communities and becoming more motivated to work with researchers. One guide learned about an obesity/weight reduction program and subsequently completed training as a facilitator for her community.

An additional outcome of CIT is the generation of grant activity, from partnership development to early stage project planning to grant submission to funding. CIT participants have been awarded more than 14 grants that use a CBPR approach to their research, including 7 CCTSI Pilot Grants, an NIH National K01 Mentored Career Development award, and an American Cancer Society Career Development Award.

## DISCUSSION

CIT has established a community–academic partnership that engages academic researchers and community members in a meaningful training experience on CE in research. CIT shares several core concepts with other immersion trainings and community-oriented primary care (COPC). However, CIT is different than COPC and cultural competency training. COPC has historically combined epidemiological and clinical skills to conduct community diagnosis and intervention development to address health care needs in a defined community, with community involvement varying among models.<sup>5–7</sup> COPC programs may introduce clinicians to the local customs and culture of a defined community to help them learn about the neighborhoods and history of where they practice. Building culture competency is essential to collaborative care and research partnership. CIT takes these key concepts through a more intense longitudinal program to not only introduce researchers to the community, but also begin the work of building a long-term relationship for collaborative research.

New skills, resources, and knowledge will have longer term

effects if, woven between these outcomes, is a change in academic researchers’ traditional career trajectory. An important outcome of the CIT is a shift in whether and how communities are engaged throughout the entire research process. The program has changed the trajectory of numerous junior academic researchers and provided benefit to a variety of research and program team members from diverse disciplines. The addition of over 55 researchers with an understanding of and skills in CE and participatory research will have an important impact on the academic community.

The partnership with community members and week intensive differentiates CIT from traditional, didactic education programs. The community liaisons, community guides, and local residents play a vital role in this training experience, specifically, the contributions from community guides as well as the benefit they report from the experience exceeded expectations. The relationships established between communities and CIT participants continue to develop and represent a long-term investment in campus–community partnerships. Because of its success, the CCTSI is incorporating and sustaining CIT as a key program of the Community Engagement Core.

## CONCLUSIONS

CE training applies to researchers from all disciplines along the continuum of discovery. CIT has increased the number of researchers who have a fundamental understanding of community-engaged research and skills to develop community–campus partnerships. CIT creates opportunities to begin long lasting community–campus partnerships throughout Colorado. The program’s model utilizes community liaisons’ and local community guides’ knowledge, skills, and life experiences to build new relationships between researchers and community. CIT is a valuable instrument for bidirectional cultural change toward community-engaged research.

## ACKNOWLEDGMENTS

The authors thank CCTSI Community Liaisons Reginaldo Garcia, Christin Sutter, and May Tran along with Janet Meredith for their contributions to the implementation of this program. We also deeply thank Dawn All Runner, Della Bad Wound, Darryl Becenti, Pamela Brown, Santos Diaz, John Emhoolah, Edith Evans, Julie Geiser, Tony Hedgepeth, Freddie Jacquez, Monica Larrea, Helen Lester, Liza Marron,

Owetta McNeil, Penny Propst, Theresa Rudder, Rosie Schell, Francisco Subiadure-Fisher, Rosalie Tall Bud, Patrick Vigil, and Greg White for their inspiring and amazing work as community guides. We also thank the many local organizations and leaders who spend their time with program participants and provide invaluable insights into their communities and personal lives. Thanks also to Elaine Belansky for her contribution to the development of the CIT curriculum and to Regina Richards for her guidance in the development of the CIT framework.

This program is funded by the National Institutes of Health as supplement grant 3UL1RR025780-02S4 under the American Recovery and Reinvestment Act. This publication is also supported by the NIH/NCATS Colorado CTSI Grant Number UL1 TR000154, and contents are the authors' sole responsibility and do not necessarily represent official NIH views.

## REFERENCES

1. Zerhouni E. Medicine. The NIH Roadmap. *Science* 2003; 302:63–72.
2. Zerhouni EA. US biomedical research: basic, translational, and clinical sciences. *JAMA*. 2005;294:1352–8.
3. Zerhouni EA. Translational and clinical science—time for a new vision. *N Engl J Med*. 2005;383:1621–3.
4. Minkler M. Community-based research partnerships: challenges and opportunities. *J Urban Health*. 2005;82, 2 Suppl. 2:ii3–12.
5. Nutting PA, Wood M, Conner EM. Community-oriented primary care in the United States. A status report. *JAMA*. 1985;253:1763–6.
6. Longlett S, Kruse JE, Wesley RM. Community-oriented primary care: Critical assessment and implications for resident education. *J Am Board Family Pract*. 2001;14:141–7.
7. Rhyne R, Cashman S, Kantrowitz M. An introduction to community-oriented primary care. In: Rhyne R, Bogue R, Kukulka G, Fulmer H, editors. *Community-oriented primary care: Health care for the 21st century*. Washington, DC: American Public Health Association; 1998.