Lessons Learned From a Community–Academic Initiative: The Development of a Core Competency–Based Training for Community–Academic Initiative Community Health Workers

Yumary Ruiz, PhD, MPH, Sergio Matos, BS, Smiti Kapadia, MPH, Nadia Islam, PhD, Arthur Cusack, PhD, Sylvia Kwong, BA, and Chau Trinh-Shevrin, DrPH

Objectives. Despite the importance of community health workers (CHWs) in strategies to reduce health disparities and the call to enhance their roles in research, little information exists on how to prepare CHWs involved in community–academic initiatives (CAIs). Therefore, the New York University Prevention Research Center piloted a CAI–CHW training program.

Methods. We applied a core competency framework to an existing CHW curriculum and bolstered the curriculum to include research-specific sessions. We employed diverse training methods, guided by adult learning principles and popular education philosophy. Evaluation instruments assessed changes related to confidence, intention to use learned skills, usefulness of sessions, and satisfaction with the training.

Results. Results demonstrated that a core competency–based training can successfully affect CHWs' perceived confidence and intentions to apply learned content, and can provide a larger social justice context of their role and work.

Conclusions. This program demonstrates that a core competency–based framework coupled with CAI-research–specific skill sessions (1) provides skills that CAI–CHWs intend to use, (2) builds confidence, and (3) provides participants with a more contextualized view of client needs and CHW roles. (*Am J Public Health*. Published online ahead of print May 17, 2012: e1–e8. doi:10.2105/AJPH.2011.300429)

Community health workers (CHWs) are frontline public health professionals who are trusted members of the communities in which they work. These trusting relationships enable them to "bridge cultural and social gaps between providers of health and social services and the community members they seek to serve."[1(p435)] Therefore, CHWs are extremely valuable given the growth of minority and underserved populations whom health care providers often have difficulty reaching[2,3] and are increasingly recognized as effective resources for improving community health. However, little published information exists on CHW training programs and curricula that prepare CHWs involved in community–academic initiatives (CAIs) in which community members and organizations partner and collaborate with academic institutions on research studies, health interventions, and other programs.

We outline the development and implementation of the New York University Prevention Research Center's (NYU PRC's) core competency–based CAI–CHW Training Program and report quantitative and qualitative evaluation results from the pilot training.

The impetus for developing this competency-based CAI–CHW training program includes (1) national recognition of the CHW workforce, (2) efforts to identify CHW roles, and (3) a body of literature that stresses diverse training needs for CAI–CHWs.

National organizations, such as the American Public Health Association and the Institute of Medicine, have recognized CHWs as effective and low-cost "community-based resources" that can be utilized to improve community health and well-being, reduce health disparities, and bridge the cultural and social barriers between underserved communities and the health care system.[2(p195),4] CHW leaders and supporters submitted a petition that was granted in 2009 by the Bureau of Labor Statistics to identify "community health worker" as a distinct Standard Occupational Classification, reflecting a desire to develop a nationally recognized definition for the work performed by CHWs.

As recognition of the value of the CHW workforce continues to expand, CHW training programs will become increasingly significant and relevant.

In 1998, the National Community Health Advisor Study established benchmarks on CHW workforce development and defined a set of key functional areas for CHW activity that were later fused into 7 essential CHW roles:

1. bridging and providing cultural mediation between communities and health and social service systems;
2. providing culturally appropriate health education and information;
3. ensuring people get services they need;
4. providing informal counseling and social support;
5. advocating for individual and community needs;
6. providing direct service, such as basic first aid and administering health screening tests; and
7. building individual and community capacity.[5–7]

Recent studies have identified additional roles for CHWs, including research.[8,9] Community–academic initiatives that seek to better understand and eliminate health disparities

have integrated CHWs into their work because of CHWs' unique "insider" status and access to accurate information in traditionally hard-to-reach communities.[10,11] The capacity of CHWs to become integral members of CAIs can be further enhanced by cultivating core competencies and skills that strengthen their understanding of the research process and the context in which health issues emerge.

The movement toward developing a shared understanding of the essential roles of CHWs yields powerful information about the training needs of this workforce. Indeed, CHWs themselves express a desire for core competency–based training rather than just problem-specific training around particular health issues and populations.[12] For instance, in a 2008 qualitative study that sought to gather CHW input on training needs, CHWs indicated receiving primarily problem- and population-specific training, but little or no core competency training. Moreover, CHWs reported that trainings do not often cover broader community and family health issues or the larger context of socioeconomic or political problems.[12] The study also revealed training needs in core competencies and specialization topics, including research skills. Similarly, Hardy et al. described a study that identified the need to train CHWs as research partners.[11] Terpstra et al. assessed a need to develop skills in basic research design, informed consent, and research ethics including the role of institutional review boards.[13]

The increased utilization of CHWs in research stresses the need for training that meets the learning needs and interests of the CAI–CHW workforce, including core competencies and research specialization.

METHODS

To develop a CAI–CHW training program, the PRC established a Training Core to plan, identify, review, refine, and approve each program component including the application of a core competency framework and identification of specialization skill sessions (Figure 1). The Training Core is comprised of community and academic experts, including individuals from the Charles B. Wang Community Health Center, a health center based in New York City, the Community Health Worker Network of New York City (CHW Network), an independent CHW professional association, and NYU faculty and staff.

The CHW Network has developed and implemented trainings for the CHW workforce and trained more than 500 CHWs. The Training Core tailored the curriculum developed by the CHW Network and identified components that fostered learning in the following core competencies:

1. CHW role and history,
2. communication skills,
3. interpersonal skills,
4. informal counseling,
5. service coordination,
6. capacity-building skills,
7. advocacy skills,
8. technical skills, and
9. organizational skills.

The Training Core adopted the curriculum's adult learning principles and popular education philosophy by utilizing interactive and participatory methodologies. The underlying rationale was based on research that illustrated that adults learn best through experience (discovery), reflection, and abstract conceptualization.[14–16] Popular education is a learning model that provides education in a way that heightens participants' awareness of the link between their felt experiences to larger societal problems, and, consequently, can lead to informed action for social change.[17] Trainings were characterized by the use of techniques that view participants as both teachers and learners, emphasizing learning through learners' experiences. Because CHWs rarely lecture those they serve, training facilitators used experiential learning methods that model CHW approaches.

The Training Core developed specialized sessions to ensure that the CAI–CHWs gain skills and knowledge integral to building their capacity to engage in research.[13] Training topics included

Note. CHW = community health worker; NYU PRC = New York University's Prevention Research Center.

FIGURE 1—Planning cycle: developing and implementing a core competency–based training for community–academic initiative community health workers.

TABLE 1—New York University Prevention Research Center Community Health Worker Training Curriculum: Core Competencies and Specialization Skills

	Core Competencies									Specialization Skills	
Modules	Role and History	Communication Skills	Interpersonal Skills	Informal Counseling	Service Coordination	Capacity-Building Skills	Advocacy Skills	Technical Skills	Organizational Skills	Research Skills	Disease and Illness Skills
Module I: essentials of CHWs											
CHW definition, history, identity, code of ethics	X					X					
CHW skills, roles, and qualities	X					X					
Module II: CHW approach											
Adult cognitive, dimensional, and moral development		X		X		X		X			
Adult learning methods and styles; Kolb learning styles		X		X		X		X			
Popular education		X		X		X		X			
Multiple intelligences		X		X		X		X			
Family assessment	X			X	X	X		X			
Empowerment approach	X		X	X		X	X	X			
Social justice	X					X	X				
Identifying community resources	X			X	X	X	X		X		
Module III: health care systems											
Health, public health, and health care	X				X	X	X				
Immigrant access to health care	X			X	X	X	X				
Social determinants of health	X			X		X	X				X
Module IV: community health worker skills I—communication											
Nonviolent and compassionate communication		X	X	X							
Making observations		X	X	X						X	
Conversation blockers and helpers		X	X	X							
Identifying and expressing feelings and needs; positive action statements		X	X	X							
Making suggestions—not demands, "I" statements		X	X	X							
Interviewing, home visiting, information gathering, and documentation	X	X	X	X	X			X	X	X	
Nonverbal communication		X	X	X							
Module V: health promotion and behavior change											
Stages of change				X	X	X		X			
Adults in transition				X	X	X		X			
Roles of a trainer	X	X		X		X		X			
Facilitation versus lecturing		X		X		X		X			
Chronic disease management				X	X	X		X			
Module VI: CHW skills II											
Privilege, power, and ethics	X	X	X	X							
Building trusting relationships, empathy, respect, equality, and dignity		X	X	X							
Boundaries and professionalism		X	X	X							
Prejudices and biases, labeling and judging, stigma and discrimination		X	X	X							
Social isolation		X	X		X	X	X				

Continued

TABLE 1—*Continued*

Module VII: advocacy and responsibility											
Confidentiality, trust	X	X	X	X						X	
Mandatory reporting									X	X	
Crisis intervention	X			X	X	X	X				
Module VIII: disease-specific skills											
Diabetes					X						X
Asthma					X						X
Nutrition					X						X
Mental health					X						X
Module IX: research and program evaluation											
Community-based participatory research	X					X	X			X	
Research and evaluation	X							X		X	
Focus group moderation		X						X	X	X	
Survey development								X	X	X	
Informed consent	X	X							X	X	
Institutional review board training								X	X	X	
Module X: computer skills: Microsoft Office, Internet								X	X	X	

Note. CHW = community health worker.

1. community-based participatory research,[18]
2. basic research design and instrument development,
3. informed consent,
4. computer skills,
5. research ethics and institutional review board compliance, and
6. general background information on diabetes, asthma, nutrition, and mental health to increase CHW awareness and recognition of these conditions and appropriate linkages for services.

Implementation

The training was offered as a 2-part, 105-hour training that was held at the Charles B. Wang Community Health Center. A community-based health center was chosen as the training site because community members may view CHWs trained in settings removed from the community as no longer "of the community," resulting in a loss of credibility.[19–21]

The training's first segment, which focused on transferable core competency skills, was cofacilitated by the CHW Network's executive director, a CHW himself, and a second trainer with extensive experience with social work counseling and CHW programs. This 70-hour training was held 2 days per week, 8 hours a day, over a 7-week period from May through July 2010.

The second segment, which focused on building CAI-specific skills, was facilitated by academic institution representatives and Charles B. Wang Community Health Center staff with considerable community-based research experience. This 35-hour specialization training was offered as 13 supplemental training sessions, which varied from 1.5 to 4 hours. These sessions were held 1 or 2 times a week over a period of 2 months, from July through September 2010. (Refer to Table 1 for training curriculum.)

Participating CHWs were recruited through purposeful sampling, targeting CHWs involved in CAIs associated with the NYU PRC or based at community-based organizations. A diverse participant group was recruited to ensure that the training curriculum was robust enough to be effective across a wide spectrum of CHWs. The mix of CHWs facilitated the attainment of feedback on the curriculum, learning methodologies, and format from a group with varied needs and experiences. It also ensured a critical

mass sufficient enough to encourage and support interactive learning and group process dynamics.

Training Program Evaluation

Three quantitative and qualitative evaluation tools were employed to capture feedback specific to the core competency and specialization segments of the CAI–CHW training program: (1) pre- and posttests, (2) open- and closed-ended surveys, and (3) a specialization instrument. For the core competencies segment, we created deidentified pre- and posttests by adapting various instruments from the University of Arizona's CHW Evaluation Toolkit.[22] These assessment tools evaluated gained perceived confidence in carrying out 14 essential roles and tasks, each of which aligned with 1 or more of the 9 core competencies. Training facilitators distributed and collected all evaluation tools. Pretests were distributed before beginning the training program and posttests at its conclusion. Open- and closed-ended anonymous surveys were distributed at core competency training midpoint and at the end to capture a more in-depth assessment of confidence, intentions, usefulness, and satisfaction. For the specialization segment, we administered an evaluation tool for each session. The domains on each evaluation tool assessed participant change in confidence, intention to use learned skills, usefulness of sessions, and program satisfaction.

Training Core researchers conducted all data analysis. We used SPSS version 19.0 (SPSS Inc, Chicago, IL) to analyze quantitative data. Two independent reviewers used Auerbach and Silverstein's model to code and analyze qualitative results.[23] Specifically, they first analyzed qualitative data to identify relevant text, which they then organized into repeated ideas. Then they organized repeated ideas into common themes. The 2 independent reviewers then came together to discuss, reorganize, and refine the repeated ideas and common themes.

RESULTS

Twelve CHWs participated in this training (Table 2). The employers of all CHWs actively sought out and supported staff's participation in the training. All participants had excellent English skills, and most were bilingual in various languages.

For the core competency segment, a 23% improvement in confidence from pretraining to posttraining was seen across all roles, tasks, and core competencies. The largest improvements in confidence were seen in understanding the stages of change (35%), comprehending CHW roles and responsibilities (34%), and appropriately celebrating and recognizing client successes (34%).

Participants reported that topics covered in the training's core competency segment were relevant to their work as a CHW, and all participants rated every training topic's usefulness as either excellent or good. Among the topics indicated as "most useful" by participants were compassionate communication and "I" statements, with a majority indicating their usefulness as excellent.

Qualitative findings validated the quantitative results of the core competency segment. Identified themes included

1. confidence in ability to utilize skills,
2. intentions related to application of learning,
3. satisfaction with the learning approaches used,
4. awareness of a social justice context, and
5. overall satisfaction with training.

Table 3 summarizes qualitative results obtained.

Participants conveyed confidence related to their ability to use learned skills noting that "the training has given me unique perspectives on health care in particular (and life in general), and the tools to do my job effectively and efficiently."

Within the theme "Intentions related to application of learning," 2 separate repeated ideas emerged. In the first, participants reported intention to apply learning to professional and personal lives, noting that "Understanding the processes and utilizing them will improve my personal and professional relationships." The second theme reflected participants' intentions to change their approach to their work: "[The training has provided me with the] opportunity to see how my 'lens' affects client situations and influences my effectiveness as a CHW."

Participants reported that the learning approaches used in the training program created an environment "making everyone feel comfortable and accepted and making all participants active participants" and that it allowed for self-reflection: "I recognize for the first time why school was so unpleasant and that I would actually enjoy learning [the popular education philosophy] way."

TABLE 2—Community–Academic Initiative Community Health Worker Training Program Participants, New York University Prevention Research Center, 2010

Participant	Age Range, Years	Gender	Race	Educational Level	CHW Experience	Employer
1	20–30	Female	African American	High-school graduate	New	CBO
2	20–30	Female	African American	≥ college graduate	New	CBO
3	50–60	Female	Latina	Some college	New	CBO
4	30–40	Female	African American/Latina	≥ college graduate	2 y	Health care facility
5	50–60	Female	Latina	Some college	24 y	Health care facility
6	30–40	Female	African American	≥ college graduate	3 y	CBO
7	30–40	Male	Asian	≥ college graduate	New	CBO[a]
8	20–30	Female	Asian	≥ college graduate	New	CBO[a]
9	20–30	Male	Asian	≥ college graduate	New	CBO[a]
10	20–30	Male	Asian	High-school graduate	New	CBO[a]
11	30–40	Female	Asian	≥ college graduate	New	CBO[a]
12	20–30	Male	Asian	Some college	1.5 y	CBO[a]

Note. CBO = community-based organization; CHW = community health worker.
[a]New York University Prevention Research Center community–academic initiative community partner agency.

TABLE 3—Qualitative Findings From Community–Academic Initiative Community Health Worker Training Program Evaluation: New York University Prevention Research Center, 2010

Common Themes	Repeated Ideas
Confidence in ability to utilize skills	Repeated idea: participants conveyed confidence related to ability to use learned skills
	"[I feel I can now] empower patients to advocate and learn to become [in]dependent in taking care of their health."
	"The training has given me unique perspectives on health care in particular (and life in general) and the tools to do my job effectively and efficiently."
Intentions related to application of learning (within this theme 2 separate repeated ideas emerged)	Repeated idea 1: reflected participants' intention to apply learning
	"I feel [the communication sessions] will define the way I communicate with my clients."
	"Everything I learned I plan on applying it to myself as well as the patients."
	"Understanding the processes and utilizing them will improve my personal and professional relationships."
	Repeated idea 2: reflected participants' intention to change their approach to their work
	"[The training has provided me with the] opportunity to see how my 'lens' affects client situation and influence my effectiveness as a CHW."
	"[The training has] helped me to focus on the strengths of patients instead of being judgmental."
	"We often do not realize the magnitude of the questions we ask clients, but this session really put me in the client's shoes."
Satisfaction with learning approaches used	Repeated idea: reflected participants' reaction to the learning approaches used in the training program
	"Popular education was especially powerful to me in many ways. I recognize for the first time why school was so unpleasant and that I would actually enjoy learning [the popular education philosophy] way."
	"No lectures–making everyone feel comfortable and accepted and making all participants active participants."
	"Offers the hands-on, meaningful engagement that 'knowledge' from books lacks."
	"It enabled me to experience self-discovery, which I believe is the best way to learn and keep the knowledge always."
Awareness of a social justice context	Repeated idea: reflected awareness of the role of CHWs within a wider context
	"The program also empowers us, the CHWs, and lights a fire within us."
	"It's not just the core competencies but recognizing you're a part of something way bigger than 'just' serving your clients. It's about creating change and advocating for social justice and equality."
Overall satisfaction with training	Repeated idea: reflected participants' satisfaction with the training
	"Thank you for providing such an experience and conducting this training in a more effective and reflective manner that really defines our dedication and respect for doing the work we do."
	"[The training is] really getting down to the 'core' of all concepts that a CHW having to use in the field at the facilities they work in."

Note. CHW = community health worker.

Participants expressed awareness of the role of CHWs within a wider context: "It's not just core competencies but recognizing you're a part of something way bigger than 'just' serving your clients. It's about creating change and advocating for social justice and equality." Finally, participants expressed overall satisfaction with the training: "Thank you for providing such an experience and conducting this training in a more effective and reflective manner that really defines our dedication and respect for doing the work we do."

Quantitative results from the specialization segment evaluation were similarly positive. On a scale of 1 to 5 with 1 being "not at all true" and 5 being "very true," participants gave an average response of 4.45 to the statement "I am confident that I will be able to use the knowledge and skills gained from this training" and a response of 4.55 to the statement "The information offered in this training was useful to my agency and/or community."

DISCUSSION

Results from this training program demonstrate that a core competency–based training can successfully influence CHWs' perceived confidence, affect intentions, and provide a larger social justice context for their work and role. The CHWs thought that all training sessions were useful and relevant to their work. The most substantial impact the program had was in increasing CHWs' confidence to utilize and implement learned skills, thus influencing their confidence to work within their communities.[24] The training also influenced participating CHWs' intentions to apply what they learned and to modify the way they approach their work.

Results demonstrated that the training provided participants with a more contextualized view of client needs and their role as CHWs. The CHWs expressed that they held new recognition that they are part of a larger workforce whose role goes beyond serving individuals and includes creating social change and advocating for social justice. The program

also fostered a clearer sense of the role and definition of what it means to be a CHW, a particularly important outcome with the diverse range of CHW backgrounds in the United States. Participants appreciated the adult learning principles, popular education philosophy, and interactive and participatory methods employed throughout the training and reported planned use of these methods with their own clients.

Challenges and Limitations

The program did experience several challenges and limitations. First, CHWs came from varying educational backgrounds, which posed a challenge to the program initially: some participants felt that the training may be unnecessary because of their already significant academic accomplishments. However, such feelings were mitigated throughout the course of the training as the use of adult learning principles and popular education philosophy encouraged communication and self-reflection among the participants. Second, there were issues of absenteeism and tardiness from some participants. As the program was developed with a keen eye toward group dynamics and shared learning and decision-making, these issues sometimes proved disruptive to the group dynamic. Recommendations from community partners and CHWs to address attrition included offering the training as an intensive short program instead of a 3-month program that meets only twice a week, and avoiding weekend sessions. In the future, the format will be modified to reflect these recommendations. In addition, CHWs expressed a desire for more opportunities to role-play the skills they were learning. Future trainings will be adjusted to include more role-playing opportunities. Because CHWs felt that all training sessions were relevant and useful, the lessons and modules will not be changed.

Finally, although the program evaluation assessed program satisfaction and usefulness as well as the impact of the training on confidence and intentions, the nature of the evaluation did not allow for an assessment of the extent to which CHWs may be able to truly utilize the knowledge and skills they have gained from the training in their jobs in the field. To evaluate long-term impact, the Training Core plans to implement evaluation surveys with the CHWs involved with the NYU PRC and their supervisors 6 months and 12 months after they have been in the field.

Social desirability bias may also have affected evaluation responses in 2 ways. First, genuine responses to the pretest might have been influenced by participant reluctance to appear unknowing, especially as many had just been hired. Despite this potential bias, an increase in confidence was still found. Second, although all evaluations were deidentified or anonymous, participants may have felt uncomfortable providing critical feedback because the facilitators and PRC staff distributed and collected the evaluation forms. In the future, all evaluations will be conducted through an anonymous online survey.

Conclusions

This program demonstrates that a core competency–based training framework coupled with CAI-specific skill sessions (1) provides useful skills that CHWs intend to use in interactions with clients, (2) builds confidence, and (3) provides participants with a contextualized view of client needs and the CHW role. For CHWs associated with CAIs, training programs that balance the tensions between community and social needs, concerns, and priorities while maintaining the research integrity of studies is important and essential to strengthening efficacy and effectiveness of CAI–CHW programs. Recent reviews have reported that CHW programs may have limited impact in terms of health outcomes.[25] However, researchers and advocates maintain that the quality of existing studies is limited by both small sample sizes and underdeveloped research methodologies. Moreover, it is important to carefully document other domains—for example, social support, community cohesion, or social capital—where CHWs' impact may be greater and the effect modifier that leads to health improvement. Ensuring that CHWs receive strong training in research development and implementation will help to accomplish this goal.

With health care reform, CHW programs are being recognized for their potential in both health promotion and disease prevention, their cost-effectiveness, and for building capacity in communities. Increasing recognition of the value of integrating CHWs within multidisciplinary community-based research teams will necessitate continued efforts to meet the training needs of this workforce. Findings from this program will contribute to the knowledge base of developing core competencies and leadership among CHWs involved in CAI. ■

About the Authors

Yumary Ruiz is with the Department of Nutrition, Food Studies and Public Health, Steinhardt School of Culture, Education, and Human Development, New York University, New York, NY. Sergio Matos is with the Community Health Worker Network of New York City, New York, NY. Smiti Kapadia, Nadia Islam, and Chau Trinh-Shevrin are with the Health Promotion and Prevention Research Center, School of Medicine, New York University. Arthur Cusack and Sylvia Kwong are with the Charles B. Wang Community Health Center, New York, NY.

Correspondence should be sent to Yumary Ruiz, PhD, MPH, Clinical Assistant Professor of Public Health, Public Health Internship Director, New York University, Steinhardt School of Culture, Education, and Human Development, Department of Nutrition, Food Studies and Public Health, 144 Lafayette St., 5th Floor, New York, NY 10003 (e-mail: yr24@nyu.edu). Reprints can be ordered at http://www.ajph.org by clicking the "Reprints" link.

This article was accepted August 22, 2011.

Acknowledgments

This report was supported by the Centers for Disease Control and Prevention (grant 1U48DP001904-01), and by the National Institutes of Health National Institute for Minority Health and Health Disparities (grants P60MD000538 and R24001786) and National Center for Research Resources (grant 1UL1RR029893).

We thank Kimberly Yu, MPH, for her instrumental role in organizing the identification of the core competencies and for conducting the background literature review during her internship with the New York University Prevention Research Center. We also thank April Hicks, MSW, for her support in implementing the training program and Shao-Chee Sim, PhD, for his feedback and suggestions on this article. We thank Mariano Jose Rey, MD, for his leadership, mentorship, and support in developing and fostering initiatives aimed to strengthen community engagement and capacity.

Note: The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention and the National Institutes of Health.

Human Participant Protection

This study was reviewed by the New York University School of Medicine institutional review board and was granted exempt status.

References

1. Brownstein JN, Chowdhury FM, Norris SL, et al. Effectiveness of community health workers in the care of people with hypertension. *Am J Prev Med.* 2007; 32(5):435–447.

2. Smedley BD, Stith AY, Nelson AR, eds. *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*. Washington, DC: Institute of Medicine, The National Academies Press; 2003.

3. Pew Health Professions Commission. *Primary Care Workforce 2000–Federal Policy Paper*. San Francisco, CA: University of California, San Francisco Center for the Health Professions; 1994.

4. Love MB, Gardner K, Legion V. Community health workers: who they are and what they do. *Health Educ Behav*. 1997;24(4):510–522.

5. Rosenthal EL, Wiggins N, Brownstein JN, et al. *The Final Report of the National Community Health Advisor Study: Weaving the Future*. Tucson, AZ: University of Arizona; 1998.

6. Wiggins N, Borbón A. Core roles and competencies of community health workers. In: Rosenthal EL, Wiggins N, Brownstein N, Johnson S, eds. *The Final Report of the National Community Health Advisor Study: Weaving the Future*. Tucson, AZ: University of Arizona; 1998: 15–49.

7. *Community Health Worker National Workforce Study*. Washington, DC: Health Resources and Services Administration; 2007.

8. *Building a National Research Agenda for the Community Health Worker Field: An Executive Summary of Proceedings From "Focus on the Future," an Invitational Conference, January 26–27, 2007*. San Antonio, TX: Community Health Resources LLC; 2007.

9. Findley S, Matos S, Hicks A, Campbell A, Moore A, Diaz D. Building a consensus on CHW scope of practice: lessons from New York. *Am J Public Health*. 2012; 102(7):■■■.

10. Brownstein JN, Bone LR, Dennison CR, Hill MN, Kim MT, Levine DM. Community health workers as interventionists in the prevention and control of heart disease and stroke. *Am J Prev Med*. 2005;29(suppl 1): 128–133.

11. Hardy CM, Wynn TA, Huckaby F, Lisovicz N, White-Johnson F. African American community health advisors trained as research partners. *Fam Community Health*. 2005;28(1):28–40.

12. Catalani CEC, Findley SE, Matos S, Rodriguez R. Community health worker insights on their training and certification. *Prog Community Health Partnersh*. 2009;3(3):227–235.

13. Terpstra J, Coleman KJ, Simon G, Nebeker C. The role of community health workers (CHWs) in health promotion research: ethical challenges and practical solutions. *Health Promot Pract*. 2011;12(1): 86–93.

14. Community Health Worker Network of New York City. Comprehensive training for community health workers: curriculum overview. 2010. Available at: http://chwnetwork.org/id34.html. Accessed May 20, 2010.

15. Knowles MS. *The Modern Practice of Adult Education*. New York, NY: Association Press; 1980.

16. Lindeman E. *The Meaning of Adult Education*. New York, NY: New Republic; 1926.

17. Freire P. *Pedagogy of the Oppressed*. New York, NY: Continuum International Publishing Group; 1970.

18. Ro M. Workforce. In: Trinh-Shevrin C, Islam NS, Rey M, eds. *Asian American Communities and Health*. San Francisco, CA: Jossey-Bass; 2009:549–566.

19. Matos S. *Summary Report of Comprehensive Community Health Worker Training*. New York, NY: Community Health Worker Network of New York City; August 2010.

20. Jancloes M. Could villages do better *without* their volunteer health workers? *World Health Forum*. 1984; 5:296–300.

21. De Jesus AC. The fault lies with the planner, not the community health worker. *World Health Forum*. 1984;5: 303–305.

22. *Community Health Worker Evaluation Toolkit*. El Paso, TX: University of Arizona, Rural Health Office; 2002. Available at: https://apps.publichealth.arizona.edu/CHWToolkit. Accessed May 20, 2010.

23. Auerbach C, Silverstein LB. *Qualitative Data: An Introduction to Coding and Analysis*. New York, NY: New York University Press; 2003.

24. Glanz K, Rimer BK, Viswanath K. *Health Behavior and Health Education: Theory, Research, and Practice*. 4th ed. San Francisco, CA: Jossey-Bass; 2008.

25. Viswanathan M, Kraschnewski J, Nishikawa B, Morgan LC, Thieda P, Honeycutt A, Lohr KN, Jonas D. *Outcomes of Community Health Worker Interventions*. Rockville, MD: Agency for Healthcare Research and Quality; June 2009.