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Caitlin G. Allen, MPH; J. Nell Brownstein, PhD; Maria Cole, MSSW, MPH; Gail Hirsch, MEd; Susie Williamson, MM, MA, BA; E. Lee Rosenthal, PhD, MS, MPH

Abstract: Although community health workers (CHWs) continue to gain credibility and recognition in the health care and public health sectors, there is still a need to expand workforce identity and development efforts, including identifying best practices for assessing CHW skill proficiencies. During this qualitative study, we interviewed 32 CHWs, trainers, and supervisors to understand current practice, perspectives, and perceived importance in assessing CHW skills and guiding principles for CHW skill assessment. Results from these interviews can be used to inform CHW workforce development to enhance efforts among those who are actively building CHW programs or who are considering improvements in strategies to assess CHW skill proficiencies. **Key words:** assessment, community-based organization, community bealth worker, bealth care, performance evaluation, skills

Author Affiliations: Emory University, Rollins School of Public Health, Atlanta, Georgia (Ms Allen), Community Health Worker Core Consensus Project, Texas Tech University Health Sciences Center El Paso, Texas (Dr Brownstein); Baylor Institute for Rebabilitation, Dallas, Texas (Ms Cole); Massachusetts Office of CHWs, Belmont, Massachusetts (Ms Hirsch); Spectrum Health Hospital Systems, Grand Rapids, Michigan (Ms Williamson); Community Health Worker Core Consensus Project, Paul L. Foster School of Medicine, Texas Tech University Health Sciences Center, El Paso, Texas (Dr Rosenthal).

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C(CHWs) are recognized members of a workforce that is integral to the health promotion, disease prevention, and disease self-management of community members (Brownstein & Hirsch, 2017). Through their competencies and their various roles and close relationships to the communities they serve, these frontline health workers help contribute to improving access to, and the experience of, health care; enhancing the health of the population; and reducing per capita costs of health care (Kangovi et al.,

Correspondence: Caitlin G. Allen, MPH, Emory University, Rollins School of Public Health, 1518 Clifton Rd NE, Atlanta, GA 30307 (calle27@emory.edu).

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2014; Kangovi et al., 2015). They strengthen health care teams as culturally competent mediators between team members and their patients and they build community capacity by enhancing the quality of life for people in poor, diverse, and underserved communities in the United States (Auerbach, 2016; Balcazar et al., 2011; Brownstein & Hirsch, 2017; Brownstein et al., 2011; Rosenthal et al., 1998; Rosenthal et al., 2010; Rosenthal et al., 2016). Because of their close, representative knowledge of the community, CHWs are considered "experience-based experts" as their roles are dictated by the needs of the community members they are serving (Allen et al., 2016); (Collins & Evans, 2002; Gilkey et al., 2011).

Although CHWs continue to gain credibility, support, and recognition in the health care and public health sectors, there is still a need to improve workforce identity and competency. Previous efforts have identified CHW core roles, skills, qualities, and training requirements, including the 1998 National Community Health Advisory Study (Rosenthal et al., 1998). More recently, the 2015-2016 national CHW Core Consensus (C3 project) used a field-driven consensus-building process to update, identify, and recommend a set of 11 core skill areas, including 3 new skills and 10 roles, including 2 new roles (see Table 1) (Rosenthal & Fox, 2017; Rosenthal et al., 2016).

As an extension of the initial C3 project, the scope of our follow-up national study included identifying best practices for assessing CHW skills that would assist CHW program and ambulatory care staff and other employers attempting to assess CHW skill proficiencies. The results of this process are the focus of this article. These key assessment methods could be considered core elements of effective CHW programs. In addition, we focused on developing a shareable assessment toolkit that includes guiding principles and best practices, as identified by CHWs, CHW trainers, and CHW supervisors; it provides field-driven, practice-based recommendations, tools, and resources that can empower CHWs to work at the top of their skill set. Self-assessment by CHWs and performance assessment by peers, trainers, and supervisors are essential for CHW skill development and identification of further areas for improvement and training and also for career advancement and employee-level standardization (Kangovi et al., 2014; Kangovi et al., 2015). This article describes the qualitative process we took to develop recommendations and gather best practices to assess the CHW skills that were identified in the initial C3 project; we will discuss the field-driven findings, including methods for assessing CHW skills, perceived importance and value in assessing CHW skills, CHW perspectives about assessment, and guiding principles for CHW skill assessment.

METHODS

All aspects of this study were institutional review board approved by the Texas Tech University Health Sciences Center, El Paso. As part of the community-based participatory research approach to identifying strategies to assess CHWs' skills proficiencies, we convened a group of 5 assessment core advisors from around the country. This group comprised CHWs, CHW trainers, and CHW supervisors who helped shape the study design, including developing interview guides which had overlapping but also more specific questions for each of the 3 groups of participants (CHWs, trainers, and supervisors), identifying interviewees, and identifying assessment tools. The assessment advisors provided input on all aspects of the study including development of key tables and figures and the analysis of results. Advisors met a total of 4 times during the study period, including an in-person meeting in May 2017.

We used snowball sampling to identify interviewees who were purposefully selected on the basis of 3 categories: CHWs, CHW trainers, and CHW supervisors. Two researchers (C.G.A. and J.N.B.) conducted the interviews (n = 32), which were completed between November and December 2016 via phone (on average, interviews lasted 35 minutes). Interviews were transcribed verbatim and quality controlled. We used the

Table 1. Roles and Skills From C3 Report^a

Roles or scope of practice

Cultural mediation among individuals, communities, and health and social service systems

Providing culturally appropriate health education and information

Care coordination, case management, and system navigation

Providing coaching and social support

Advocating for individuals and communities

Building individual and community capacity

Providing direct service

Implementing individual and community assessments

Conducting outreach

Participating in evaluation and research

Skills

Communication skills

Interpersonal and relationship-building skills

Service coordination and navigation skills

Capacity-building skills

Advocacy skills

Education and facilitation skills

Individual and community assessment skills

Outreach skills

Professional skills and conduct

Evaluation and research skills

Knowledge base

constant comparative method of qualitative research inquiry to categorize and code qualitative data. This approach allowed us to then identify themes and insights (Corbin & Straus, 2008). Three independent coders created a coding scheme to identify key themes. We created themes for each of the 3 participant groups within each group and compared across these groups, eventually collapsing them into several major categories across all groups. The richness of the data allowed us to elucidate effective assessment practices and provide pertinent examples from the field.

RESULTS

Demographics of interviewees

Among the 32 interviewees, 8 identified as CHWs, 6 as CHW supervisors, 10 as CHW trainers, and 8 as more than 1 of these roles. Participants were from 14 different states including Alabama, Arizona, California, Illinois, Indiana, Kentucky, Michigan, Minnesota,

Missouri, North Carolina, New Hampshire, New Jersey, New York, New Mexico, Oregon, Pennsylvania, and Texas.

Hiring, training, and on-the-job assessment methods

Assessment methods used during CHW biring

Using assessment tools during the hiring process helped programs make better hiring decisions with regard to the most suitable and creative CHWs. Strategies for assessing CHW skill proficiencies during the hiring process included meet and greet events, interviews with scenarios, and mock client engagement sessions. These assessment methods, although varied, helped improve the hiring agency's relationship with the potential candidate and assess the CHW's skills and qualities.

One program in Pennsylvania hosts a meet and greet event with potential CHWs and then decides whom to invite for a first round of interviews. A manager and another staff

^aFrom Rosenthal et al. (2016).

member participate in each interview during which CHWs are given specific scenarios and asked to role-play how they would handle the situation. This is followed by a final round of interviews during which role play and case studies are employed for assessing the CHWs. An example of this program's role-play scenario is as follows: "You met patients at the hospital last week, you tried to call them and their numbers are disconnected or they're not returning your phone calls." This scenario is used for the staff to get a sense of how the CHW would approach that situation; interviewers were, "...looking for people who will say: if I tried calling them and they're not answering, I would pop up at their home, or if they had an appointment, I would maybe meet them at their appointment here." This multistep approach to hiring allowed the program to build rapport with the candidates prior to their interview. Similarly, a program in Arizona stated that "trust building from the beginning is important between CHWs and supervisors."

A program in Alabama conducts a mock engagement session or a mock call. It evaluates CHWs, "to see how they're interacting with our mock patient over the phone. We're looking at their empathy skills, ... just overall, how they talk on the phone." An Indiana program uses a list of C3 project-identified skills and characteristics to assess people it is interviewing for CHW positions. Community health workers in a Michigan program were questioned to better assess "how they're going to interact, what their personality traits would be, what kind of relationships they already have in the community, to give us an idea of how they'll work in the community." Occasionally, CHWs were "tested to measure a certain knowledge or ability the program calls for."

Training assessment methods

Interviewees discussed methods for assessing CHWs in the training setting and the importance of training for CHW supervisors. Generally, training programs used pre-post written tests. In addition, some training programs used diverse assessment tools such as

role play, scenarios, mock phone calls, weekly action plans designed by CHWs, and video critiques. Using a diversity of assessment tools allowed training programs to immediately better evaluate how well students understand topics covered and identify specific conceptual and practical areas that needed improvement, and then fine-tune their trainings.

A New Mexico program provides ongoing training at monthly CHW meetings: "We've sat in computer labs for . . . four hour blocks and practiced.... We'll ask (CHWs) ... (to) create a fake client, show me some of your documentation, and then we'll have others take a look at it and critique it." In addition, in the New Mexico program, CHW contracts require that supervisors must support their CHWs to attend 4 full-day trainings yearly. If the program manager becomes aware of good training opportunities, she encourages CHWs to attend. Similarly, a trainer/supervisor in a New Hampshire program holds weekly hourlong meetings with CHWs during the training period:

I wanted to hear what they were picking up, and what they considered important and unimportant at that point out of the curriculum. That was really interesting to hear their concept of the things they were learning ... talk about what's going well, ... what's not going well for them ... and what it meant for them to be CHWs.

In addition to role plays and scenario assessments by trainers, a California program felt that performance-based tests are critical, and engages teams, consisting of instructors, experienced CHWs, a community-based member, and possibly previous CHW trainees, to conduct CHW assessments. As one trainer explained:

I have a few different techniques I use with doing role plays. Sometimes it's that I play the client and every student has to interact with me as the CHW, other times they're working with each other, where one's the CHW and one's the client, and then there will be observers, or sometimes even a team of CHWs. It's not just the two of them (role playing); it's everybody else in the classroom. So if you're not participating, you are still required to be able to give feedback; you're still expected to

engage in terms of both positive and kind of corrective analysis.

Another California program has a rigorous assessment component, and its goal is to measure whether or not the training actually leads to workforce development, employment, and improved quality. Community health workers take written pretests and have a practical examination (based on role play in scenarios) at the end of each unit. Faculty from the school of public health who are also involved in the training program, program trainers, and personnel from partner organizations participate in observing, scoring, and then debriefing of each student. In a Texas program, CHW students cannot move on to a practicum without passing complete core skill assessment components.

Community health workers in a Pennsylvania program must pass a series of training checkpoints before they can be cleared to work independently as a CHW. In addition, the CHWs shadow a senior CHW for a few days, then they switch roles, and the senior CHW (who is trained to give feedback) shadows the new CHWs. Then the manager shadows and provides feedback to the new CHWs. Finally, the director shadows and signs off on each CHW. Throughout the shadowing process, a series of checkpoints are used to assess different types of competencies. Community health workers are also observed in a clinical setting and are quizzed to ensure that they correctly know and follow clinical manual protocols.

A physician trainer in a New Jersey program assesses CHWs through observation and by asking them simple questions, some of them in writing "to see if they have really learned what is discussed. We went over and over and over until they all understood it." In a Michigan program, pre- and posttests provide feedback to trainers regarding what students have learned and what needs to be improved in the training. The training is very interactive—using role playing, videos, game playing, and brainstorming. The trainers formally provide regular reports to the organization about their own observations of improvement.

Assessment of supervisors and trainers

Supervisor training was also an important topic that interviewees discussed. Supervisors in a California program are given an orientation of the CHW program, the competencies and the expectations of CHWs in the field, and the expectations the program has of the supervisors. One supervisor from a CHW program in California said:

Many people get put into supervisory positions who have no training themselves, and it's kind of shoot from the hip, you learn as you go along. And I think that's always been a struggle, because some of the navigators or CHWs get a lot of support from their supervisors who have good training, and others don't, and it puts me in an awkward position sometimes, because at times I really have to come down more on the supervisors than I do on the navigators.

A Kansas program sends supervisors to a leadership training at a local university that provides manager tools and "helps them understand how to be supervisors, what's important, how often you need to meet with your employees, and how do you support them."

Finally, a few interviewees discussed the assessment of CHW trainers and facilitators. At the end of each class in a training program in Arizona, CHWs complete a feedback evaluation form on the trainers and CHW facilitators: "and that's important for us to hear from trainees so that we see where they're at and what areas they might need further support ... as they continue in their process." At the end of each training course, a focus group is conducted with participants regarding the CHW facilitator as to "whether they were easy to understand and knowledgeable on the subject." After CHWs are on the job, team managers assess progress and any further training needed by the CHWs.

Importance and value of on-the-job assessment

Our interviewees informed us that solid CHW assessment lessens the historical pitfalls of CHW programs. In particular, skill assessment can help turnover in CHW positions and variability in program delivery, goes beyond disease-specific metrics, improves infrastructure for supporting CHWs (eg, regular supervisory meetings and reports that are reviewed by supervisors and often by managers and directors; use of technology and other methods for assessment; program guidance for CHWs), improves quality of evidence related to CHW performance and quality control, and helps program staff better understand the work of CHWs with patients and other community members, thus easing their integration into multidisciplinary teams.

On-the-job assessment methods

Interviewees described that the use of diverse performance assessment tools to assess CHWs on the job helps program managers and supervisors enhance job performance by building trust with CHWs; understanding CHW roles and barriers to carrying out those roles; and enabling them to better support CHWs by referring them for additional training and resources. It also helped supervisors inform clinical staff and program administrators so that they better understand CHW roles and successes and are able to appreciate CHWs' contributions to program protocols and program outcomes. Having tools that allow for CHWs to assess their supervisors offers valuable feedback and opportunities for improvement.

Types of on-the-job assessments and tools used

A full set of tools was identified during interviews (see Table 2). Often, supervisors informally see CHWs daily: they talk to them, ask and answer questions, and look at their plans and their paperwork. This process helps supervisors know what CHWs are doing, what needs to be done, and to how to make necessary modifications. Supervisors observe CHWs at home visits and debrief with them afterward. Other supervisors have a weekly check-in to see how CHWs are doing and to learn where their support is needed and how they can help CHWs grow professionally. These meetings allow for a variety of topics to be covered such as how CHWs are working

Table 2. Tools Used to Assess CHW Skills Proficiencies

Checkpoints throughout the program Chart audits with feedback Client intake tools Client-tracking tools Clinical supervisor assessments

Coaching

Community expert/supervisor assessments Dashboard (tracks metrics and generates reports)

Demonstration of practical skills Feedback on data entry Filming with feedback

Games

Goal cards/reports Group discussions

Home visit score sheets/checklists

Huddles (weekly)

Individual assessments

Informal questioning

Internship assessments

Interview guides

Job descriptions

Learner self-assessments

Learning modules with checklists

Monthly reports

Observations with reviews and feedback

Online surveys

Outcome measures

Patient satisfaction surveys/interviews/ reports with scores

Partnership logs

Performance checklists

Portfolios

Pre- and posttests

Peer assessment

Referral tracking

Review of CHW notes and encounter forms regarding community members, patients

Role playing/scenarios/simulations Shadowing by program coordinators/ supervisors/lead supervisors/ senior CHWs

Skill tests

Teacher and trainer assessments Tracking community involvement and strategic partnerships Verbal feedback

Videotaped interactions

Abbreviation: CHW, community health worker.

with their patients on goal setting and other issues, how they are doing with regard to stress management, and to give feedback on what CHWs are doing well and identify areas for improvement. Newer CHWs are *directly observed* and mentored accordingly. Some supervisors regularly contact care coordinators and doctors to better understand the quality of their relationships (eg, are CHWs reaching out when they need to and are they working together as a team with the care coordinators?).

One program has an electronic system into which CHWs submit data and the system is able to analyze the data and generate a variety of reports. A connection report tracks the number of times CHWs contact patients or community members. A progress report pulls data from CHW notes and electronic health records that cover key areas being measured. Following the Triple Aim frameworks, the progress report looks at the reach of the CHWs' work—for example, what percentage of patients reached goals, percentage of hospital readmission, and at the satisfaction score of CHWs by patients (coordinators' sample of CHW patients directly about satisfaction). The report tracks various metrics about what CHWs do and can compare one CHW with other CHWs. Chart audits are conducted and feedback is provided to CHWs. This process allows CHWs to learn from their mistakes and also to become aware that certain successful methods they used with one patient may help them resolve similar issues with future patients. Managers are consumers of the reports; they do weekly reviews of the reports. Using this assessment reporting has resulted in improved performance and decreased variability among the CHWs.

Other programs also have CHWs use electronic data systems that document everything they do with patients. These data become part of a patient's electronic health records, which are reviewed by supervisors, nurse managers, and even directors. Programs routinely conduct quality control assessments and quarterly and annual performance reviews. These reviews assess specific roles and competencies in clinical and community settings. Some supervisors refer to job descriptions to "see

what you (CHWs) are doing and what you're not, and if something needs to be improved." Some programs have CHW self-assessments, peer assessments, and supervisor assessments by CHWs. Peers are taught how to give feedback in a constructive and informative manner. Community health workers and their supervisors meet to discuss both CHW self-assessments and supervisor assessments by CHWs.

Clinical programs sometimes include *patient assessments of CHWs*. For example, supervisors call patients randomly to ask about how they are working with their CHW. One supervisor said,

I'll ask them ... how likely are they to recommend this program to a friend or close relative to kind of get that [...] I'm also confirming that they got their medication. I'm also confirming that they go to a doctor within two weeks. We're assessing the CHWs based on patient outcomes, and we're able to get really great, honest feedback from the patients, and I'm able to share it with my team.

CHW views on their assessments

In our interviews, we asked CHWs to discuss their perspectives on their skill proficiency assessments. They generally felt that their assessments were fair, useful, and helped improve their job performance and recognition. One CHW said, "I frequently tell my executive director and anyone else I'm working with to please, if they see something that I can improve, make it known, pull me to the side or mentor me." A second CHW said, "I'm passionate about serving my community, I'm open to feedback both from my supervisor, from my program manager, from my coworker, and from the community I serve."

Another CHW told us, "At first clinicians do not know what CHWs are doing, but they learn from the supervisor that CHWs are doing intake, education, and referrals. Then clinicians refer patients to CHWs." Another CHW revealed: "It's really helpful to be able to have a strong relationship between the CHW and the supervisor or whoever is doing assessment with them. That just can't be like somebody that they never see, that they don't have any relationship with that doesn't understand

anything about their community. When that happens, that is really a recipe for losing that CHW," due to frustration with the situation.

CONCLUSION

This report describes findings from qualitative interviews with CHWs, supervisors, and trainers who identified existing efforts to assess CHW skill proficiencies, including methods for assessment, the value of assessing CHW skill proficiencies, and opportunities and future directions. As we reviewed

findings from the interviews, some guiding principles related to CHW skills assessment emerged that we (authors and members of our C3 field advisory team) feel would benefit CHW programs (see Table 3). Principles include the following: use of innovative mixed methods and technologies; conducting assessment with cultural competency and humility; the use of assessment throughout the life cycle of a program; the active role of CHWs in the assessment process; involving those served by CHWs in assessment; assessment of supervisors and use of assessment by

Table 3. Guiding Principles for CHW Skill Assessment

- CHW self-assessment is an essential part of improving skill proficiency
- Whenever possible, use innovative, mixed methods and technologies for hiring, training, and skill assessment

Include didactic and nondidactic approaches.

Provide on-the-job opportunities for shadowing, one-on-one training, and coaching by experienced CHWs, supervisors, clinical staff, and others.

CHWs are partners in skill assessment—prioritize CHW knowledge and life experience.

- Conduct CHW assessment with cultural competency and humility
 - Develop the assessment process together with CHWs.

Develop assessment tools and methods that are fair and that reflect and honor the work of CHWs.

- Use assessment throughout the life cycle of the program
 - Skill proficiency assessment takes time, trust, and patience.
 - Using an assessment process during the hiring process helps managers and leadership make the best choices and informs them of the training needs of the people they hire.
- CHWs should play an active role in assessing themselves, their peers, and their work environment

Assessment could be perceived by CHWs as code for discipline. Instead, make sure that CHWs understand that the purpose of assessment is to allow for professional development so that they can work most effectively and address any deficiencies (continuous quality control).

Provide opportunities for CHWs to provide insight and support in jointly solving problems in staff meetings, case management, huddles, and other team activities.

- Involve those served by CHWs in assessment
 - Provide opportunities for community members and patients to give feedback on CHW services.
- Supervisors should be assessed to continually support CHWs.
 - Provide training and practice opportunities for staff new to supervising CHWs.

Provide opportunities for CHWs to assess quality of supervision, institutional support for their work, adequacy and quality of training (initial and ongoing), respect, and opportunity for community engagement.

Encourage supervisor presence and consistent mentoring to minimize CHW turnover and set the foundation for meaningful assessment.

Supervisors need to clearly understand the factors affecting CHW work and offer appropriate support to ensure CHW success.

Consider contextual factors (eg, support from management) that may impact CHW assessment.

Abbreviation: CHWs, community health workers.

supervisors to support CHWs; and consideration of contextual factors that may impact CHW assessment.

The assessment of CHWs is important to improve skill proficiency. The CHW assessment process is important across the life-course of a CHW program: during the hiring process, after hiring, and on a continual basis. A supportive environment that acknowledges CHWs as partners in skills assessment will allow for continuous individual development and a strong CHW program. Providing opportunities for CHWs to regularly assess their own experiences and consider ways to improve their work promotes partnership between the supervisor and the CHW and encourages CHWs to provide insight and support in jointly solving other problems that may arise in the organization. Above all, the assessment of CHW skills and proficiencies should be a collaborative, positive process that builds on prior training and experiences. We sought to offer insights from the field about CHW skill assessment and encourage these findings to be used as a starting point to consider creative best practices for assessing CHW skills.

Our interviewees suggested that assessing CHW skill proficiencies can reduce CHW turnover, improve CHW capacity to deliver interventions with greater fidelity, and enhance CHW effectiveness with community members and team members. From their experience, proficient CHWs are more likely to engender patient-provider-system trust and subsequently improve patient outcomes. They have observed that as CHW supervisors develop a better understanding of CHW roles and skills, they can translate this information to clinical managers, other team members, clinical and nonclinical leadership, employers, and other stakeholders. In turn, this support leads to a better integration of CHWs into teams and understanding and appreciation of the value of CHWs, the work they do within agencies and within the communities they serve—including how they overcome barriers, forge community-clinical linkages, and help community members and patients reach their health goals. These kinds of positive outcomes can greatly improve organizational capacity and ultimately enhance population health.

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