Development of Training Curriculum to Improve Patient Communication Skills and Social Support Among Community Health Workers

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ABSTRACT

Background: Effective provider communication skills are important for patient decision-making and understanding, particularly for those with low health literacy. A gap exists in training methods and curriculum for community health workers (CHWs). Brief description of activity: Through a clinical and academic partnership, pilot training curriculum focused on patient communication skills was developed to align with CHW scope of work. Implementation: The curriculum was implemented in three 2-hour training sessions over WebEx with seven state-certified CHWs. The goal was for CHWs to understand the key elements and application of active listening, Teach Back, and action planning in a clinical setting. The sessions included didactic and skills practice modules for each skill. Results: A survey was distributed to CHWs to evaluate knowledge, skills, and attitudes and reactions to training methods, instructors, and relevance using the Kirkpatrick’s evaluation model (Reaction and Learning). Although CHWs agreed that they had actively participated in the training and that the instructors were well-prepared, there was less agreement that the course was relevant. CHWs reported an increase in understanding of active listening and action planning, capability of using Teach Back and providing social support, and ability to teach, whereas a decrease was reported in the capability to use action planning. When probed about training relevance, CHWs felt action listening and Teach Back were relevant, but that action planning was not relevant to their responsibilities. This gap in responsibilities was also acknowledged by the clinical leadership. Lessons learned: The training allowed the CHWs to build on subsequent skills from previous sessions and to discuss struggles. A need for tools for integrating the skills in the clinical workflow were requested by CHWs and clinical leadership. These tools offer the opportunity to tailor future trainings on communication skills or patient scenarios. Future trainings should include CHWs to provide insight into scope of work. [HLRP: Health Literacy Research and Practice. 2022;6(2):e142–e150.]

Plain Language Summary: It is important for community health workers to communicate with patients so that patients can understand information and make their own decisions. There is not enough known about the best way to train CHWs in patient communication. This training was created to help CHWs use three patient communication skills in their clinic.

Effective communication skills are necessary for health care providers to positively affect patient health. Providers can share information, but the patient must comprehend and retain the information as well. Almost one-half of adults in the United States have trouble understanding and applying health information (Nielsen-Bohlman et al., 2004). People with low health literacy have less understanding of medication regimens, disease processes, and methods for disease management (Cavanaugh et al., 2008; Neter & Brainin, 2019; Sarkar et al., 2015). Given this, health literacy has become a priority for providers. However, providers might not have awareness of the patient’s literacy level or be able to assess health literacy in a clinical setting. Providers have also been shown to overestimate patients’ health literacy and therefore miss opportunities to appropriately connect with their patients (Voigt-Barbarowicz & Brütt, 2020). A universal precautions approach to health literacy through patient communication has shown to be effective for patients with varying
levels of health literacy (Cifuentes et al., 2015; Glick et al., 2020). Communication skills such as active listening, Teach Back, and action planning help providers communicate more effectively with patients. Active listening calls for providers to pay close attention to the speaker by focusing on what they say and how they say it (Colton et al., 2006). Kaphingst et al. (2014) found that engaging with patients and asking them questions led to an increase in self-reported patient decision-making after a health care visit. In Teach Back, a provider asks the patient to repeat back the information that was covered to check for understanding (Anderson et al., 2020; Caplin & Saunders, 2015). An action plan consists of short, easy steps for patients to complete to achieve their health-related goals. Creation of a patient action plan has been shown to improve patient outcomes for a variety of health conditions including diabetes, weight management, asthma, and depression (Mauksch & Safford, 2013).

There are varied published methods available for training health care providers in patient communication skills, including didactic sessions, modeling, role playing, instructional videos, and informational hand-outs (Anderson et al., 2020; Cifuentes et al., 2015; Kornburger et al., 2013; Mahramus et al., 2014; Morony et al., 2018). One method has not been found to be more effective. The literature is currently lacking data on which training methods might work best for nonclinical providers, such as community health workers (CHWs). Previous trainings have been tailored for an advanced degree (e.g., Physicians, Nurse Practitioners) or clinical provider audiences (e.g., Medical Assistants, Nurses). CHWs have a unique set of core competencies to improve patient understanding and social support, to promote healthy behaviors in health literacy interventions, and to facilitate discharge follow-up (Han et al., 2017; Kangovi et al., 2014; Rosenthal et al., 2018). During the coronavirus disease 2019 (COVID-19) pandemic, CHWs have been indispensable in contact tracing and public health messaging (Rosenthal et al., 2020). As more patients experienced unemployment, food insecurity and social isolation, providing support and follow-up care became more important. An opportunity existed to develop patient communication training curriculum to align with CHW core competencies and scope of work. To address the gap in training methods and curriculum, a didactic and skill building pilot training was implemented. The curriculum focused on communication skills needed to address patient needs and to provide effective social support in a clinical setting. To assess implementation, a mixed-method evaluation was conducted.

**PROGRAM DESCRIPTION**

The training was a project between an academic health institution and the clinical practice arm focused on preventing hospital readmissions. The academic partners had expertise in quality improvement methods, curriculum development,
The goal of active listening is to understand patient concerns and to show understanding of a patient's experience. The four-step cycle created included (1) Ask, (2) Reflect, (3) Affirm, and (4) Rephrase (Colton et al., 2006; Laurens et al., 2020; Miller et al., 2013). First, the CHW asks open-ended questions so the patient can explain in detail what they are thinking and feeling. Open-ended questions are used throughout the steps, but they are an essential in gathering information. The CHW uses verbal acknowledgments like “Tell me more about...” to assure the patient they are listening. The CHW reflects on the patient's message, feelings, and verbal and nonverbal cues to gain a deeper understanding. The CHW must integrate the patient's message, feelings, and/or behaviors through verbal prompts. The CHW affirms the patient's self-efficacy, abilities, and current efforts through affirming statements like, "It seems like you are really good at..." Lastly, the CHW rephrases or summarizes the patient's message in their own words. Paraphrasing starters such as “Let me see if I understand you...” are used to clarify the message and place the responsibility of understanding on the CHW.

Teach Back

Teach Back is a method to educate the patient with the necessary information and confirm their understanding by asking them to repeat the information in their own words. Although an operational term for Teach Back is not always reported, the four-step cycle included (1) Explain, (2) Teach Back, (3) Assess, and (4) Repeat (Anderson et al., 2020; Caplin & Saunders, 2015; Prochnow et al., 2019). The CHW explains the information to the patient in short, plain language statements without medical jargon. Next, the CHW asks the patient to Teach Back by repeating the information in their own words to check for understanding. The CHW assesses patient understanding through verbal probes to put responsibility on the CHW, for example: "Can you please explain it back to me so I can be sure I explained everything clearly?" A CHW can "chunk and check" to assess patient understanding. A CHW breaks down the main points of the information into two to three smaller “chunks” or concepts. The CHWs

CURRICULUM DEVELOPMENT

A collaborative approach was used to identify training content. In May 2020, a pilot Teach-Back training with the same seven CHWs was delivered (Holcomb et al., 2022, unpublished). A need to reinforce Teach Back alongside developing additional patient communication and social support skills was identified. Few, if any, CHW curricula focused on social support skills could be identified. We did, however, identify evidence suggesting that social support provided by CHWs was an effective component in improving health (Taylor et al., 2019). Taylor et al. (2019) proposed a framework for understanding CHW-mediated health improvement through assessing social support needs; providing appropriate informational, appraisal, instrumental, and emotional social support; and engaging with patients. The framework was connected to patient communication skills identified in literature. The clinical partner team chose active listening, Teach Back and action planning for focus. After reviewing the literature and existing curricula, a four-step cycle with each skill was created to align with CHW scope of work.

The training addressed pre-COVID-19 standard of care and the most pressing needs of the clinic population during the COVID-19 pandemic. As patients were hesitant to attend clinic appointments, CHWs spent increased time on the phone with patients discussing COVID-19. Screening patients for social needs and navigating them to resources was the standard of care for CHWs before COVID-19. However, given the effect of the pandemic on employment, social relationships, and communities, CHWs spent time addressing the needs of patients in socially isolated settings. An opportunity was identified for CHWs to use communication skills to provide informational, appraisal, and instrumental support through community resource referrals, in addition to, explanations about vaccines and testing, dispelling COVID-19 myths, and tangible incentives to keep appointments (e.g., distribution of emergency food boxes). Across these activities, CHWs could also provide emotional support (i.e., empathy) to patients.

and community-based trainings with CHWs. The academic partner included a faculty member, two staff members, and a graduate assistant. The clinical partner, the outpatient clinical practice plan, conducts ongoing population health interventions and practice improvement activities. The clinical partner included a Director of Population Health and two CHW coordinators. A total of seven state-certified CHWs who had worked for the clinical partner for at least 1 year and had been identified as future co-trainers attended the training. The CHWs served patients who were uninsured, refugees, recently discharged, high-acuity utilizers, and those with a high-risk pregnancy, diabetes, and sickle cell disease. The responsibilities of CHWs included discharge follow-up, appointment scheduling, and navigation to resources such as food, maternity care, and financial prescription assistance. The training was deemed quality improvement and did not need Institutional Review Board approval.
reviews the first “chunk” with the patient and assesses understanding through verbal prompts and asking questions. Once the patient expresses understanding, the CHW moves to the next “chunk.” The patient is ultimately asked to repeat back the “chunks” in a grouped meaningful way.

Action Plan

Action planning is a key tool for effective patient self-management (Lenzen et al., 2017). Action plans have been hypothesized to address self-management of medical, social, and emotional needs. Regardless of foci, provider training is critical as they work with patients to identify goals and actions to improve their health. Although there is not a standard set of essential elements for action planning in the literature, studies to date have applied steps across patient self-assessment of a focal area for goal development, formulation of goals and an action plan, strategies for coping (e.g., addressing barriers), and follow up (Lenzen et al., 2017). The four-step cycle included (1) Ask, (2) Brainstorm, (3) Assess, and (4) Create. First, the CHW uses open-ended questions and applies the skills learned from active listening to engage the patient. The CHW works with the patient to brainstorm a list of potential goals and to identify the goal the patient wants to work on, and feels is attainable through small steps. Next, the CHW uses a confidence question and scale to assess readiness. They use open-ended questions to assess barriers to goal achievement. Lastly, the CHW and patient create a follow-up plan that includes a date, time, and mode (e.g., telephone, in person) for reconnecting.

CURRICULUM DESIGN

Adult learning theories and practices including formative assessment, active learning, problem-based learning, and multiple learning styles were adopted (Bryan et al., 2009; Knowles, 1984). Adult learning principles focused on actively engaging the learner, interactive methodologies, and skill-building exercises have been used in previous instruction design and training with CHWs (Nebeker & López-Arenas, 2016; Ruiz et al., 2012; St John et al., 2015). The CHWs were presented information in multiple strategies through instructional online video, “in person” (WebEx) instruction, written material (PowerPoint presentation and skill checklists), interactive practice activities, and observation of the training team and their peers role-playing patient scenarios. A formative assessment and problem-solving opportunities were provided in the homework activity. Adult learning literature suggests that learning is effective if the information presented is contextually relevant and recognizable (Bryan et al., 2009). The clinical team provided input on clinical workflow to inform practice activities and role-playing scenarios.

Implementation

The curriculum was delivered in three training sessions over WebEx video conference. The training was originally intended to be delivered in-person; however, due to in-person restrictions because of the COVID-19 pandemic, implementation was shifted to WebEx. Each session was developed to be a 1-hour didactic information and a 1-hour skills practice module.

Active Listening

We expected to implement a 1-hour didactic and 1-hour skills module but shifted to one 2-hour module focused on practicing each step (Ask, Reflect, Affirm, Rephrase). We were able to role-play multiple scenario-based conversations to reinforce the didactics. The session began with an exercise for CHWs to describe in-person and phone conversations in which they felt someone listened to them. We led a discussion on how they knew someone was (or was not) listening and the effect on the conversation. We then introduced active listening steps, techniques, and verbal statements. An example of each step was presented in a scenario reflecting the CHW scope of work. The CHWs practiced active listening steps in a similar scenario. The CHWs were asked to incorporate previous steps in subsequent practice activities. For example, to practice affirming patients, we asked CHWs how they would incorporate open-ended questions and reflect on a patient’s message, feelings, and behavior. The training team role-played three scenario-based conversations combining both active listening ideal techniques and mistakes. The CHWs used checklists to evaluate the conversations and to discuss opportunities for improvement. We had planned to include 1-hour for skills practice but shifted the practice to homework for the CHWs to incorporate all the steps of active listening. We were unable to complete the 1-hour skills practice within the session as additional time was spent reviewing each step of active listening. In the homework, CHWs wrote a conversation reflecting how to best use active listening with a patient.

Teach Back

As planned, we delivered a 2-hour session across two modules. The first 1 hour consisted of a review didactic session followed by another 1 hour of discussion and skills practice (CHWs had been introduced to Teach Back [Holcomb et al., 2022, unpublished]). We started the session with a discussion and exercise demonstrating the importance of
Teach Back. CHWs were asked how about experiences receiving instructions from an automobile repair company. The challenges identified in the exercise were aligned with the challenges in communicating information with patients. We presented the four steps of Teach Back (Explain, Teach Back, Assess, Repeat), and techniques on how best to explain information to patients (e.g., using plain language). We then reviewed examples of verbal prompts to use when asking a patient to Teach Back and open-ended questions to assess the patient’s understanding. We discussed using these examples to repeat or rephrase the information. Next, the training team role-played a scenario-based scripted conversation combining active listening with Teach-Back techniques. The CHWs assessed the use of the steps and techniques in the conversation and opportunities for improvement. Lastly, two CHWs were given similar case scenarios prior to the session to role play with a partner for the group in the second hour. The other CHWs observed and critiqued how well both the active listening and Teach-Back steps were integrated into the conversation. For homework, CHWs were encouraged to integrate these steps into patient interactions that week.

**Action Plan**

We planned to deliver a 1-hour action plan module focused on didactic content and a 1-hour action plan practice module while incorporating active listening and Teach-Back skills from previous sessions. In addition to didactic material, role playing and patient scenarios were used to practice each step of action planning (Ask, Brainstorm, Assess, Create). Before the session, the CHWs were asked to view a video which action planning implemented incorrectly followed by correct use of the steps. At the beginning of the session, the video was discussed. CHW experience with action planning was assessed at the beginning of the session and we discussed how action planning was implemented in person versus over the phone in their clinical settings. We then presented the four-step action planning cycle. First, we reviewed active listening and asking open-ended questions with a specific focus on identifying patient areas for goal development. Then, we reviewed goal development, defined SMART (Specific, Measurable, Attainable, Realistic, Timebound) goals and explored strategies to brainstorm and prioritize goals with the patient. Third, we reviewed ways to assess patient confidence and barriers. A confidence scale was presented, and the effect of naming barriers reviewed. Finally, follow up strategies were reviewed and practiced, including specifying a day and time, mode for follow up and using open-ended questions and rephrasing to ensure understanding by both the CHW and patient. Lastly, the training team role-played a scenario-based conversation with a patient combining both active listening and Teach Back with action planning steps. The CHWs listened to the conversation and discussed opportunities for improvement and benefits of applying the skills in the patient interaction. During the discussion of the action planning video, it became evident that the CHWs’ role in the clinical practice was less focused on chronic disease management or medication adherence and more focused on patient social needs. We discussed how they would appreciate discussing patient conversation scenarios that more closely align with their scope of practice. Scenarios were adjusted to focus on topics like patient referral to community resources.

**RESULTS**

**Pre–Post-Training Survey**

An electronic survey was distributed to CHWs to evaluate two levels of the Kirkpatrick’s Model on a Likert-type scale (Fernandes et al., 2020) (Table 1). The scale had five options from 5 - Strongly Agree to 1 - Strongly Disagree and a mean score was created. The pre-survey was sent 1 week before the training to evaluate knowledge, skills, and attitudes related to the training goals using level 2 of the Kirkpatrick’s Model (Learning). The post-survey was sent after the last training to assess level 2 in addition to reactions to training methods, instructors, and course relevance in level 1 of the Kirkpatrick’s Model (Reaction). The level 1 and 2 results are outlined in Figure 1 and Table 2, respectively. All seven CHWs completed the survey. In level 1, although the CHWs reported they actively participated in the training and the instructors were well-prepared, there was less agreement that the course was relevant and the course and instructors were motivating. For level 2, a Wilcoxon sign-rank test were performed with pre-and post-survey responses. Only one statistically significant change was detected (understanding of the Teach-Back protocol, p < .05) but descriptive changes were identified. An increase was seen in the understanding of active listening and action planning, capability of using Teach Back and providing social support, and ability to teach all three skills. A decrease was seen in capability to use action planning and understanding patient communication as an important tool in a clinical setting and in effective social support.

**Debrief Meetings**

The training team facilitated a 1-hour debrief meeting with the seven CHWs and then with the three members of the clinical leadership team. The CHWs felt the training overall was useful in their daily work, particularly the role-playing exercises and continued skill reinforcement.
One CHW reported using Teach Back and active listening with her patients. She received positive feedback from patients even though the conversation took more effort and time. The CHWs were probed about the survey results from both levels of the Kilpatrick’s Model. When probed about course relevance and motivation from level 1 (Reaction), the CHWs noted the active listening and Teach-Back skills were relevant to their work and they were motivated to use them. The disagreement in relevance of action planning and social support varied depending on the clinic setting and responsibilities. Some CHWs felt this skill was an encroachment on other clinical staff responsibilities (e.g., case managers), whereas others involved in transitions of care felt it fit within their scope of work. The leadership noted action planning is a current gap in CHW responsibilities, but recent transitions of care initiatives have focused on patient follow-up over a longer period. Similarly, the leadership discussed a need for tailoring training in new clinics while maintaining focus on the CHW core competencies of patient communication and social support. The goal is to trigger CHWs to use communication skills and provide social support no matter the patient through a universal approach to health literacy. CHWs communicate with all patients as if they have low health literacy rather than screening patients for literacy status. From level 2 (Learning), CHWs noted social support had been interpreted as a clinical term (i.e., counseling). When discussed, CHWs felt they were able to offer social support in terms of offering empathy and understanding to patients. When discussing the decrease in the agreement for using action planning, one CHW called it a “rude awakening.” She described misjudging her action planning skills: “. . . laughing at myself because I thought I was doing a great job before, but when I took this [course], I was like, maybe not. . . It showed me where I was not as strong as I thought I was…” Both groups expressed interest in tools to improve the use of the skills in the clinic. In addition, the leadership expressed the need to track skills through observation, checklists, and team meetings. Lastly, in

**TABLE 1**

Pre–Post-Training Evaluation Survey

| Level 1: Reaction<sup>a</sup> |
|-------------------------------|
| To what extent do you agree or disagree with each of the following statements? |
| Strongly Agree, Somewhat Agree, Neither Agree nor Disagree, Somewhat Disagree, Strongly Disagree |
| 1. I enjoyed the course |
| 2. In my opinion the course was relevant |
| 3. I am pleased that I invested my time in training |
| 4. I believe that the course helped me in my health care career |
| 5. I participated actively in the course |
| 6. The course was motivating |
| 7. The instructor(s) were well-prepared to apply the modules |
| 8. The methodologies used were stimulating |
| 9. The instructor(s) motivated me to study |
| 10. I pushed myself to learn as much as possible |

| Level 2: Learning |
|-------------------|
| To what extent do you agree or disagree with each of the following statements? |
| Strongly Agree, Somewhat Agree, Neither Agree nor Disagree, Somewhat Disagree, Strongly Disagree |
| 1. I understand patient communication as an important tool in a clinical setting |
| 2. I understand the protocol for active listening |
| 3. I understand the protocol for Teach Back |
| 4. I understand the protocol to make an action plan |
| 5. I understand patient communication as important in providing effective social support |
| 6. I am capable of using an active listening in my routine work |
| 7. I am capable of using Teach Back in my routine work |
| 8. I am capable of using an action plan in my routine work |
| 9. I am capable of providing effective social support through patient communication |
| 10. I am able to teach and train others in active listening |
| 11. I am able to teach and train others in Teach Back |
| 12. I am able to teach and train others in creating an action plan |
| 13. I am able teach and train others to provide effective social support through patient communication |

Note. Based on Kilpatrick’s Model (Fernandes et al., 2020).
“Only assessed in post-training evaluation survey.”

Figure 1. Post training evaluation survey results for level 1 of the Kilpatrick’s Model. The degree to which CHWs agree with 10 statements related to training reactions. *Possible range for scale is 1 to 5 (A higher score is a greater level of agreement for the statement).
alignment with the survey CHWs expressed confidence and willingness to teach others. The leadership mentioned the importance of incorporating the CHWs in the maintenance and tracking of skills as they provide feedback for training for the next cohort and participate as co-trainers.

**LESSONS LEARNED**

Though the training was required to adapt to the changing health care environment due to the COVID-19 pandemic, we still employed many of the same educational techniques (e.g., presentations, interactive practice activities, scenario-based role-playing) as previous studies. Similar to Morony et al. (2018), we instituted a 2-hour Teach-Back session; however, instead of ongoing check in sessions with our CHWs regarding Teach-Back proficiency after the initial session (Holcomb et al., 2022, unpublished), we continued to have 2-hour sessions on communication techniques. Our additional sessions served as a method of allowing the CHWs to check in with the training team and their colleagues about struggles implementing the Teach-Back skills they had learned. We suspect Anderson et al’s (2020) method of providing refresher sessions several months after the initial training to the CHWs will be needed as Teach Back is not the cultural norm for the CHW’s clinical environment. Until Teach Back as well as active listening and action planning are universally practiced and reinforced by leadership, there will be the risk of CHWs slipping back to easier and faster modes of conversation with patients. The training team created one-page skill checklists to reinforce skills during patient calls. The CHWs noted that these were helpful in their initial phone conversations after each training, although additional tools for integrating the skills in the clinical workflow were requested by both CHWs and clinical leadership. The tools include phone call scripts, adapted skills checklist like those used in the training, and action planning templates. The tools provide an opportunity to identify gaps in skill development for quality improvement as a less burdensome method of skill reinforcement. The tools are complementary to refresher trainings and can help tailor future trainings on certain skills or patient scenario examples. We were also not able to monitor the use of the skills after training implementation due to COVID-19 restrictions. In the debrief meetings, we heard from both groups that the skills were being integrated into patient calls, but we were not able to capture this in a standardized way. Increased monitoring and evaluation across multiple modes (e.g., observation rubric, meeting discussions) is necessary to examine the integration of skills and the training effectiveness.

Opportunities for future training adaptations were identified. The sustainably of current and future recommended trainings will rely on curriculum alignment with CHW scope of work (Anderson et al., 2020). The CHWs noted a need to update practice and role-playing scenarios to reflect a broader scope of work. Although we were not able to monitor the
daily clinical workflow, we were able to receive input on curriculum from clinic leadership. As in previous studies, tailoring training practice activities, scenarios, and checklists were helpful. (Anderson et al., 2020; Laurenzi et al., 2020). Although beneficial, a need to include CHWs to better understand daily clinical workflow and align course relevance was identified. We expect that including the CHWs as co-trainers in the next training cohort will help better reflect scope of work, particularly in the action planning session. In the next trainings, the CHWs will serve as role models to their peers by role playing scenarios to demonstrate the skills. This also allows an opportunity for skill development for those CHWs. In addition, while the CHWs reflected a range of clinic populations and responsibilities, all were state-certified CHWs who met state training standards across a cohesive list of core competencies. However, the applicability of this curriculum extends beyond CHW training in Texas communities. Although states have various core competencies and training standards, there is a growing consensus to standardize CHW core competencies (Rosenthal et al., 2018). Future studies could examine the alignment of curriculum to state and national CHW core competencies to ensure consistency across training implementation.

REFERENCES

Anderson, K. M., Leister, S., & De Rego, R. (2020). The 5Ts for Teach Back: An operational definition for Teach-Back training. HLRP: Health Literacy Research and Practice, 4(2), e94–e103. https://doi.org/10.3928/24748307-20200318-01 PMID:32293689

Bryan, R. L., Kreuter, M. W., & Brownson, R. C. (2009). Integrating adult learning principles into training for public health practice. Health Promotion Practice, 10(4), 557–563. https://doi.org/10.1177/1524839909328488

Caplin, M., & Saunders, T. (2015). Utilizing Teach-Back to reinforce patient education: A step-by-step approach. Orthopedic Nursing, 34(6), 365–368. https://doi.org/10.1097/ORN.000000000000197 PMID:26575509

Cavanaugh, K., Huizinga, M. M., Wallston, K. A., Gebretsadik, T., Shintani, A., Davis, D., Gregory, R. P., Fuchs, L., Malone, R., Cherrington, A., Pignone, M., DeWalt, D. A., Elasy, T. A., & Rothman, R. L. (2008). Association of numeracy and diabetes control. Annals of Internal Medicine, 148(10), 737–746. https://doi.org/10.7326/0003-4819-148-10-20080520-00006 PMID:18490687

Cifuentes, M., Brega, A. G., Barnard, J., Mabachi, N. M., Albright, K., Weiss, B. D., & Brach, C. (2015). Implementing the AHRQ health literacy universal precautions toolkit practical ideas for primary care practices. Agency for Healthcare Research and Quality. https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/quality-patient-safety/quality-resources/tools/literacy-toolkit/impguide/healthlit-guide.pdf

Colton, T., Dillow, A., Hainsworth, G., Israel, E., & Kane, M. (2006). Community home-based care for people and communities affected by HIV/AIDS. A handbook for community health workers. Pathfinder International. https://chcwcentral.org/wp-content/uploads/2013/11/Community-Home-Based-Care-for-People-and-Communities-living-with-HIV-AIDS-A-Handbookfor-Communi-ty-Health-Workers-Entire-Handbook.pdf

Fernandes, R. A. M. L., de Oliveira Lima, J. T., da Silva, B. H., Sales, M. J. T., & de Orange, F. A. (2020). Development, implementation and evaluation of a management specialization course in oncology using blended learning. BMC Medical Education, 20(1), 37. https://doi.org/10.1186/s12909-020-1957-4 PMID:32028935

Glick, A. F., Farkas, J. S., Rosenberg, R. E., Mendelsohn, A. L., Tomopoulos, S., Fierman, A. H., Dreyer, B. P., Migotsky, M., Melgar, J., & Yin, H. S. (2020). Accuracy of parent perception of comprehension of discharge instructions: Role of plan complexity and health literacy. Academic Pediatrics, 20(4), 516–523. https://doi.org/10.1016/j.acap.2020.01.002 PMID:31954854

Han, H. R., Song, Y., Kim, M., Hedlin, H. K., Kim, K., Ben Lee, H., & Roter, D. (2017). Breast and cervical cancer screening literacy among Korean American women: A community health worker-led intervention. American Journal of Public Health, 107(1), 159–165. https://doi.org/10.2105/AJPH.2016.303522 PMID:27854539

Holcomb et al. (2022). Teach-back training [Unpublished raw data].

Nielsen-Bohlman, L., Panzer, A. M., & Kindig, D. A. (Eds.). (2004). Health literacy: A prescription to end confusion. National Academies Press. https://doi.org/10.17226/10883

Kangovi, S., Mitra, N., Grande, D., White, M. L., McCollum, S., Sellman, J., Shannon, R. P., & Long, J. A. (2014). Patient-centered community health worker intervention to improve posthospital outcomes: A randomized clinical trial. JAMA Internal Medicine, 174(4), 535–543. https://doi.org/10.1001/jamainternmed.2013.14527 PMID:2451422

Kaphingst, K. A., Weaver, N. L., Wray, R. J., Brown, M. L., Buskirk, T., & Kreuter, M. W. (2014). Effects of patient health literacy, patient engagement and a system-level health literacy attribute on patient-reported outcomes: A representative statewide survey. BMC Health Services Research, 14(1), 475. https://doi.org/10.1186/1472-6963-14-475 PMID:25288179

Knowles, M. S. (1984). Andragogy in action: Applying modern principles of adult education. Jossey Bass.

Kornburger, C., Gibson, C., Sadowski, S., Maletta, K., & Klingbeil, C. (2013). Using “Teach-Back” to promote a safe transition from hospital to home: An evidence-based approach to improving the discharge process. Journal of Pediatric Nursing, 28(3), 282–291. https://doi.org/10.1016/j.pedn.2012.10.007 PMID:23220377

Laurenzi, C. A., Gordon, S., Skeen, S., Coetzee, B. J., Bishop, J., Chadema-na, E., & Tomlinson, M. (2020). The home visit communication skills inventory: Piloting a tool to measure community health worker fidelity to training in rural South Africa. Research in Nursing & Health, 43(1), 122–133. https://doi.org/10.1002/nur.22000 PMID:31793678

Lenzen, S. A., Daniëls, R., van Bokhoven, M. A., van der Weijden, T., & Beurskens, A. (2017). Disentangling self-management goal setting and action planning: A scoping review. PLoS One, 12(11), e0188822. https://doi.org/10.1371/journal.pone.0188822 PMID:29176800

Mahramus, T., Penoyer, D. A., Frewin, S., Chamberlain, L., Wilson, D., & Sole, M. L. (2014). Assessment of an educational intervention on nurses’ knowledge and retention of heart failure self-care principles and the Teach Back method. Journal of Critical Care, 43(3), 204–212. https://doi.org/10.1016/j.jcrc.2013.11.012 PMID:24559753

Mauksch, L., & Safford, B. H. (2013). Engaging patients in collaborative care plans. Family Practice Management, 20(3), 35–39. PMID:23939738

Miller, W. R., & Rollnick, S. (2013). Motivational Interviewing: Helping people change (3rd ed.). The Guiford Press. https://www.thrc.org/sites/default/files/resources/2017-10/fpntc_oars_model_2016.pdf

Morony, S., Weir, K. R., Bell, K. J. L., Biggs, J., Duncan, G., Nutbeam, D., & McCaffery, K. J. (2018). A stepped wedge cluster randomised trial of nurse-delivered Teach-Back in a consumer telehealth service. PLoS One, 13(10), e0206473. https://doi.org/10.1371/journal.pone.0206473 PMID:30579942

Nebeker, C., & López-Arenas, A. (2016). Building research integrity and
capacity (BRIC): An educational initiative to increase research literacy among community health workers and promoters. *Journal of Microbiology & Biology Education, 17*(1), 41–45. https://doi.org/10.1128/jmbe.v17i1.1020 PMID:27047588

Neter, E., & Brainin, E. (2019). Association between health literacy, eHealth literacy, and health outcomes among patients with long-term conditions. *European Psychologist, 24*, 68–81. https://doi.org/10.1027/1016-9040/a000350

Prochnow, J. A., Meiers, S. J., & Scheckel, M. M. (2019). Improving patient and caregiver new medication education using an innovative Teach-Back toolkit. *Journal of Nursing Care Quality, 34*(2), 101–106. https://doi.org/10.1097/NCQ.0000000000000342 PMID:30198943

Rosenthal, E. L., Menking, P., & Begay, M. G. (2020). Fighting the COVID-19 merciless monster: Lives on the line—community health representatives’ roles in the pandemic battle on the Navajo Nation. *The Journal of Ambulatory Care Management, 43*(4), 301–305. https://doi.org/10.1097/JAC.0000000000000354 PMID:32858729

Rosenthal, E. L., Menking, P., & St. John, J. (2018). The community health worker core consensus (C3) project, a report of the C3 project phase 1 and 2: Together leaning toward the sky. https://0d6c00fe-ee1-492b-8e7d-80acecb5a3c8.filesusr.com/ugd/7ec423_2b0893b cc93a422396c744be8c1d54d1.pdf

Ruiz, Y., Matos, S., Kapadia, S., Islam, N., Cusack, A., Kwong, S., & Trinh-Shevrin, C. (2012). Lessons learned from a community-academic initiative: The development of a core competency-based training for community-academic initiative community health workers. *American Journal of Public Health, 102*(12), 2372–2379. https://doi.org/10.2105/AJPH.2011.300429 PMID:22594730

Sarkar, U., Karter, A. J., Liu, J. Y., Adler, N. E., Nguyen, R., Lopez, A., & Schillinger, D. (2010). The literacy divide: health literacy and the use of an internet-based patient portal in an integrated health system-results from the diabetes study of northern California (DISTANCE). *Journal of Health Communication, 15* (Suppl. 2), 183–196. https://doi.org/10.1080/10810730.2010.499988

St John, J. A., Shubert, T. E., Smith, M. L., Rosemond, C. A., Howell, D. A., Beaudoin, C. E., & Ory, M. G. (2015). Developing an evidence-based fall prevention curriculum for community health workers. *Frontiers in Public Health, 2*, 209. https://doi.org/10.3389/fpubh.2014.00209 PMID:25964920

Taylor, B., Mathers, J., & Parry, J. (2019). A conceptual framework for understanding the mechanism of action of community health workers services: The centrality of social support. *Journal of Public Health (Oxford, England), 41*(1), 138–148. https://doi.org/10.1093/pubmed/fdx161 PMID:29228321

Voigt-Barbarowicz, M., & Brütt, A. L. (2020). The agreement between patients’ and healthcare professionals’ assessment of patients’ health literacy—A systematic review. *International Journal of Environmental Research and Public Health, 17*(7), 2372. https://doi.org/10.3390/ijerph17072372 PMID:32244459