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RESEARCH ARTICLE

Evaluating a Community Health Worker Training Program for Medication Adherence Support

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Introduction: Medication nonadherence significantly contributes to poor health outcomes and increased healthcare costs, particularly in chronic diseases like hypertension. Community Health Workers (CHWs) are well-positioned to address adherence barriers but often lack specific training in medication management and particularly in improving medication adherence. The objective of this study is to evaluate a training program for CHWs focused on medication adherence support for patients with hypertension.

Methods: The study team designed a comprehensive training program consisting of pre-recorded lectures and a 2-day live session. The live training content included didactic lectures integrated with hands-on practice cases and small group breakout sessions. The program was evaluated using pre and posttests assessing knowledge and self-efficacy. A quality improvement process was implemented post-training to support CHWs in their new roles.

Results: A total of 109 CHWs participated in the training. Knowledge scores improved from 28% pretraining to 81% posttraining ($p<0.001$). Self-efficacy scores showed significant improvement across all measured domains.

Conclusions: This structured training program effectively improved CHWs' knowledge and confidence in supporting medication adherence. This approach shows promise for enhancing CHWs' roles in collaborating with healthcare professionals for chronic disease management.

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INTRODUCTION

Poor adherence to prescribed medications significantly contributes to morbidity, mortality, and increased healthcare costs.[1,2] Among chronically ill patients, about 50% do not take medications as prescribed.[3–5] In the U. S., medication nonadherence is associated with 4%–28% of medication-related hospital admissions.[6–9] Cardiovascular disease, particularly hypertension, presents a significant challenge regarding medication adherence.[10] Despite the known benefits of antihypertensive, lipid-lowering, and antidiabetic medications in reducing ischemic events, adherence to these therapies is poor,[11] with studies reporting that 50%–80% of patients treated for hypertension are non-adherent to their prescribed regimens.[12–14] The WHO considers this lack of adherence the most significant cause of failure to achieve blood pressure control.[5]

Multiple factors contribute to medication nonadherence, including forgetfulness, complex regimens, insufficient education about medication benefits, concerns about side effects, and medication costs. Health literacy also plays a crucial role, with an estimated 90 million adults in the U.S. having inadequate health literacy, a factor particularly prevalent in minority groups.[15–18] In addition, patients' health beliefs, previous experiences with therapies, lack of motivation, language barriers, lower socioeconomic status, lack of family or social support, and fewer available resources also affect medication adherence.[19–21]

Pharmacists are well-positioned to evaluate and educate patients about medication adherence. However, a survey of 275 patients indicated that those with limited health literacy were less likely to ask their local pharmacist questions about medications.[18] Pharmacists often face difficulties in improving medication use and addressing adherence barriers, especially in culturally diverse populations where they usually lack shared life experiences. Patients may be more willing to express concerns about their health and medication use practices with individuals with shared life experiences.[22]

Community Health Workers (CHWs) have emerged as a promising solution to address these challenges, especially in culturally diverse communities.[23–25] CHWs often share similar backgrounds and experiences with the individuals they serve, allowing for a better understanding of the language, culture, and traditions affecting medication use. This shared experience can facilitate uncovering health information that might otherwise go unnoticed by primary care physicians or pharmacists.[22] Further, Brownstein et al.[26] conducted a systematic review of CHW interventions for hypertension care, highlighting the potential of CHWs in improving blood pressure control.

However, CHWs often lack specific training in medication management and adherence support. To address this gap, this study evaluated a targeted training program designed to enhance CHWs' knowledge and skills in collaborating with healthcare professionals in improving medication adherence among patients with hypertension. The authors previously showed that CHWs who completed this training program were able to improve their clients' medication adherence and blood pressure control.[27]

METHODS

The training program was developed through a collaboration between the University of Florida, State of Florida Department of Health, and Centers for Disease Control and Prevention (CDC) and was approved by the University of Florida IRB. The training focused on medication adherence assessments to supplement other training that CHWs had already completed. It consisted of a 2-day live program supplemented with 6 hours of pre-recorded lectures watched before the in-person program. The live training content included didactic lectures integrated with hands-on practice cases and small group breakout sessions led by 2 or more clinical pharmacist faculty trainers, including 5 or 6 CHWs per group. Small group sessions allow CHWs to maximize their participation in an interactive format, share their previous experiences, and apply new skills to facilitate interventions related to medication adherence. Two patient case studies were used to teach various medication management skills, with student pharmacists playing the role of simulated patients. The patient case studies are based on real-life scenarios from clinical practice, featuring patients with poorly controlled high blood pressure and facing challenges and barriers to medication adherence because of poor medication practices. The curriculum for the 2-day live program format is illustrated in Figure 1.

Population

This project aimed to assess the effectiveness of the 2-day live format of the CHW training program by evaluating changes in knowledge and self-efficacy through pre and posttests.

CHWs were employed by 5 organizations in Florida, including a large managed care health plan providing care in clinics across large urban counties (45 CHWs), a federally qualified community health center in a large urban county (19 CHWs), a free healthcare clinic in a large urban city (6 CHWs), a county aging organization (3 CHWs), and an organization serving the healthcare needs of American Indians and other underrepresented populations in both rural and urban counties (36 CHWs). Supervisors from each organization selected CHWs to participate in the training. CHWs were tasked

Pre-In Class Homework Pre-Recorded Lecture Videos:

1. Pre-assessment
2. Watch video: CHW Introduction of the program including the Why in terms of Medication Safety
3. Watch video: Cultural Competency and Health Disparities
4. Watch video: Effective Communication and Motivational Interviewing

Day 1:

Time	Topic	Learning Objectives
7:30-8:00AM	**Breakfast & Registration Sign-In**	
8:00 – 8:15AM **(15 Min)**	**Introductions & Expectations for program**	**Objectives:** • Brief introduction of Facilitators *(5 min)* • Purpose & overview of training program *(5 min)* • Expectations and Requirements of Sponsoring Organization *(5 min)*
8:15-8:45AM **(30 min)**	**MTM CHW process: Step by Step Practice Model**	**Objectives:** • Why do we need a better solution • Describe each major step • CHW Role and Do/Don't • Pharmacist role • Practice Model of CHW and Pharmacist
8:45-9:30AM **(45 Min)**	**The CMR (Comprehensive Medication Review): Personal Med List**	**Objectives:** • What is a Personal Medication List (PML) and why is PML important to conducting an Adherence Workup and CMR • Establishing a Medication List • Discuss Current Medication List provided by Physician(s) and tactics for collecting information from a physician's office • Discuss Rx refill history and tactics for collecting refill history from a pharmacy • Rx history data sources; strengths, weaknesses and gaps • How to create a dialog with patient to learn about Rx and self-medications for establishing a medication list • Level of specificity needed about use of each Rx and Self-Medication within PML, including time of day, proximity to meals, dosage regimen on encounter form • Identifying discrepancies between Physician List, Rx refill history and Patient interview and how to document
9:30-10:00AM **(30 Min)**	**Encounter Form Process**	**Objectives:** • Introduce form • Review different sections • Introduce Jessica Faith patient case & how to use form
10:00-11:30AM **(90 Min)**	**Medication List Breakout sessions**	**Objectives:** • Review Jessica Faith PML • Creating a medication list from physician, pharmacy and patient sources • Practice asking patents questions and probing about meds including Self-medications • Documentation

Figure 1. Two day CHW MTM live training program curriculum.
CHW, Community Health Workers; CMR, Comprehensive Medication Review; DRAW, Drug Adherence Workup; HTN, Hypertension; MAP, Medication Action Plan; MI, Motivational Interviewing; UF, University of Florida.

11:30-12:15PM **(45 Min)**	**Hypertension and Diabetes Review**	**Objectives:** • Review topics about Understanding the disease, consequences of poorly controlled HTN and T2DM, Complications, and Treatment strategies • Understand medical management issues relevant to adherence workup in HTN and T2DM • Identifying Lifestyle issues HTN and T2DM • Emphasize what questions CHW should ask
12:15-12:45PM **(30 Min)**	**Pharmacy ABC's**	**Objectives:** • Walk in the shoes of a busy community pharmacist: competing pressures faced by a pharmacist on daily basis • Pharmacy types • Drug Tiers and Retail Cost sharing • Pharmacy Record Systems and how to understand Refill records
12:45-1:15PM	**30 min Lunch Break**	
1:15-1:45PM **(30 Min)**	**Communication Motivational Interviewing (MI)**	**Objectives:** • Understanding how MI is different from how most people communicate with one another • Applying MI to: (a) Word choice and vocabulary, (b) Patient recruitment, (c) Addressing non-adherence • HTN and Diabetes MI examples • Build rapport with patient and address issues they may have
1:45-2:00PM **(15 Min)**	**MI Videos**	**Objectives:** • Play videos (6.5 min) • 2nd video about (8 min)
2:00-2:15PM **(15 Min)**	**MI Personal Story**	**Objectives:** • Impact and strength MI can have
2:15-2:45PM **(30 Min)**	**MI practice small groups**	**Objectives:** • **Practice MI case**
2:45-3:30PM **(45 Min)**	**Medication Adherence**	**Objectives:** • Prevalence of adherence issues in HTN and T2DM • Most common adherence issues in HTN and T2DM • Alternate ways to uncover adherence issues: Rx refill history, Objective measures such as drug levels, patient self-report, patient interview • Assessing Health Literacy and why it's important • Discuss DRAW Adherence questions on form • Listening for Patient Concerns and Patient's self-reported Goals • Documenting adherence barriers
3:30-5:00PM **(90 Min)**	**Medication Adherence Breakout sessions**	**Objectives:** • Jessica Faith Case: Asking questions, active listening and probing • Practice adherence questions from encounter form without asking them directly • Identify the medication related problems (MRP) to be tackled • Documentation

Figure 1 Continued.

Day 2:

Time	Topic	Presenter
7:30-8:00am	**Breakfast & Sign-In**	
8:00-8:30AM **(30 Min)**	**Review Day-1 Topics**	**Objectives:** • Review important training objectives from yesterday • CMR • Encounter Form • MI
8:30-9:00AM **(30 Min)**	**Medication Adherence Review**	**Objectives:** • Discuss set of Adherence questions on form • Listening for Patient Concerns and Patient's self-reported Goals • Documenting adherence barriers • Show a Poor Interview and an Excellent Interview
9:00-9:45AM **(45 Min)**	**Care Plan and Documentation**	**Objectives:** • Learning to be clear, concise when speaking with Patient • Communicating with physicians or pharmacists about MRPs
9:45-11:00AM **(75 Min)**	**Care Plan Breakout Session -small groups**	**Objectives:** • Jessica Faith Case: Practice discussing with a pharmacist uncovered MRPs and prioritizing them • Medication reconciliation and finalizing PML • Construct care plan/action plan • Practice discussion with Doctor • Documentation on Encounter form
11:00-11:45AM **(45 Min)**	**Encounter form Process & Flow**	**Objectives:** • Discuss logistics – sending forms to UF, communicating with MTM Center pharmacist, implementing MAP • Discuss follow-up encounters
11:45-12:30PM **(45 Min)**	**Lunch break**	
12:30-2:30PM **(120 Min)**	**Lynda Blake Case Breakout session:**	• Apply all lessons to the Lynda Blake Case
2:30-3:15PM **(45 Min)**	**Debriefing – Review important Topics**	
3:15-4:30PM **(75 Min)**	**Post-assessment**	

Figure 1 Continued.

with managing the care of patients diagnosed with uncontrolled high blood pressure who were prescribed at least 1 antihypertensive medication associated with prescription refill data showing poor adherence based on a Proportion of Days Covered (PDC) below 0.80.[28] The structure of the two-day live training program was uniform for CHW program participants from each of the five organizations, and each session was delivered exclusively to CHWs from a single organization.

Measures

The program evaluation focused on two variables: knowledge and self-efficacy (see Table 1 for operational definitions). The knowledge assessment included open-

Table 1. Knowledge and Self-Efficacy Components of Pre- and Post-Test Training Material.

Assessment	Components	Number of questions	Type of question	Number of points per question	Total points possible
Knowledge Assessment of Principles MTM	• Principles of MTM support services • Scope of the CHW within MTM support services • Documentation Requirements • Gathering information pertinent to medications from various resources — the patient, prescription refill records, and the medical record • Identification of medication adherence barriers • Communication skills, including motivational interviewing	13	Open-ended/ short answer	5	65 points possible and scaled on a range from 0 to 100%
Knowledge Assessment	• Health Disparities and Cultural Competence	8	Multiple Choice	1	8 points possible and scaled on a range from 0 to 100%
Self-Efficacy of Providing MTM Services	• Ability to identify and enroll patients • Provide MTM support services • Document services	14	Scale ranging from 0 (cannot do at all) to 10 (highly certain can do)	Each item scored from 0 to 10 by respondent. Each response assigned to a category according to the following ranges: Low self-efficacy (0 to 3); Moderate self — efficacy (4 to 6); High self- efficacy (7 or greater)	Reported as improvement from pre- to post-training and as percentage of trainees falling within each range of self-efficacy (low, moderate, high)

CHW, Community Health Workers; MTM, Medication Therapy Management.

ended questions about Medication Therapy Management (MTM) principles and multiple-choice questions on health disparities and cultural competence. The MTM assessment required short answers to 13 open-ended questions, which were graded by student pharmacists using a rubric. This rubric covered concepts related to identifying medication use practices, adherence barriers, and strategies to resolve them. To achieve a high score, CHWs needed to show a thorough understanding of these concepts. The self-efficacy assessment used a scale from 0 (cannot do at all) to 10 (highly certain can do) across 14 activities or tasks related to MTM services.

A panel of eight pharmacy faculty members and practitioners reviewed the study instruments for face and content validity, assessing clarity, relevance, and comprehensiveness. Feedback was gathered through structured questionnaires, and revisions were made based on the panel's feedback.

Statistical Analysis

Statistical analysis was conducted to evaluate whether the training program improved CHWs' knowledge of MTM principles and self-efficacy. Paired t-tests were performed to determine the significance of improvements within the CHW group from pre- to post-training. To account for multiple comparisons, Bonferroni correction was applied, adjusting the significance level to 0.0038 for MTM assessment questions and 0.002 for self-efficacy questions. For the self-efficacy assessment, the study calculated the mean change score for each of the 14 items from pre- to post-test. In addition, the study determined the percentage of trainees reporting post-training scores in each self-efficacy category (low, moderate, or high).

To evaluate the consistency of improvements across the five organizations employing CHWs, the study used a linear mixed-effects model. In this model, pre- and post-program scores were treated as fixed effects, whereas the CHWs' organizations were treated as a random effect. The study examined the interaction between time (pre- and post-program) and organization to assess consistency. A significant interaction would indicate variability in improvements across organizations, suggesting that data from all training programs should not be pooled for further analyses. Conversely, a non-significant interaction would support pooling the data for a more comprehensive analysis.

A process was developed to support CHWs in their new roles after completing in-person training. As CHWs enrolled eligible clients in the MTM service, they gathered patients' current medication lists from physicians and pharmacy prescription refill information. CHWs then met with patients and documented medication use, adherence barriers, and other relevant information. An experienced student pharmacist reviewed this information before sending it to a partnering pharmacist. This ensured ongoing quality assurance and continuous improvement of CHWs' skills. Partnering pharmacists developed care plans based on the information shared by CHWs. CHWs used these care plan recommendations to resolve adherence barriers by interacting directly with patients and consulting with their medical providers as needed. About 4 weeks later, CHWs followed up with patients to check on the resolution of adherence barriers. This process was repeated as long as patients continued their relationship with CHWs.

In addition, a 3-hour remediation training was provided for CHWs about 3 to 4 months after the live training program. All trained CHWs were invited to participate in the remediation session, where they met in small groups to practice the MTM process on a simulated patient case, discuss challenges, and share strategies for resolving them. Documentation performed by CHWs on the simulated patient was assessed for accuracy and completeness.

RESULTS

The training programs were offered in either English or Spanish, based on the CHWs' preferred language. A total of 109 CHWs participated in an in-person, live two-day training program format, which was preceded by six hours of pre-recorded video lectures.

A linear mixed-effects model was used to assess whether score improvements from pre- to post-program were consistent across the 5 organizations employing CHWs. The model revealed a significant main effect of time, with post-program scores being significantly higher than pre-program scores ($p<0.001$), indicating an overall improvement in performance after training. The random effect of organization was small, and there was no significant interaction between time and organization, suggesting that the magnitude of improvement did not differ significantly between the 5 training programs. Therefore, CHWs from all 5 organizations experienced similar improvements, justifying the pooling of data across the different training programs for subsequent analyses.

The average pre-test score on the CHW MTM principles knowledge assessment for the 109 CHWs was 28.2%, which increased to 81.2% post-training. The average pre-test to post-test change score was 53% ($p<0.001$).

Table 2. Performance on MTM Practices Knowledge Assessment

MTM Practices Knowledge Question	Pre-training mean score ± SD[a]	Post-training mean score ± SD[a]
1. What are the questions in the DRAW tool and the suggested response?	0.0±0.0	5.0±0.0[b]
2. When examining a medication profile and refill history, what are the red flags to look for?	2.3±1.0	4.0±0.9[b]
3. What does SBAR stand for regarding communicating with other healthcare professionals?	1.7±0.8	4.9±0.2[b]
4. What does the PDC tell you and not tell you?	0.4±0.3	4.6±0.5[b]
5. What is an interview strategy to help patients remember the OTCs, herbal, dietary supplements and home remedies they use?	0.3±0.2	3.8±0.8 [b]
6. What are the strengths and weaknesses of a patient-provided medication history?	2.4±0.8	4.6±0.9[b]
7. Provide an example of an open-ended "why" question without using the word why	1.6±0.7	4.3±0.8[b]
8. What contribution to your developing a personal medication list and care plan would you expect a participating pharmacist to do?	1.1±0.9	2.4±0.8[b]
9. What are the strengths and weaknesses of a pharmacy refill record?	2.3±0.8	4.7±0.6[b]
10. What information would you gather during a follow-up to the initial CMR interview?	1.7±0.9	3.3±0.8 [b]
11. What are the strengths and weaknesses of a patient's medical record base/ medication history?	2.7±0.8	4.7±0.4[b]
12. List the ways to determine medication adherence.	1.6±1.0	3.4±0.9 [b]
13. List the four key steps to sharing expertise with the patient.	0.0±0.0	3.1±0.8 [b]

[a]Scores range from 0 (poor response) to 5 (excellent response).
[b]Post-training score greater than pre-training score ($p<0.0038$).
CMR, Comprehensive Medication Review; DRAW, Drug Adherence Workup; MTM, Medication Therapy Management; OTC, over the counter; PDC, Proportion of Days Covered; SBAR, Situation, Background, Assessment, Recommendation.

CHWs showed substantial improvements across all thirteen MTM principles questions post-training, with significant differences in scores for questions related to the Drug Adherence Workup (DRAW) tool,[29] Situation, Background, Assessment, Recommendation (SBAR) communication,[30] understanding of Proportion of Days Covered (PDC), interview strategies, medication history, using open-ended questions, assessing pharmacy claims data (refill records), follow-up information, medical record history, medication adherence, and sharing expertise (Table 2). These improvements remained statistically significant after applying the Bonferroni correction for multiple comparisons, indicating the robustness of the training program's impact.

The average pre-test score on the Knowledge about Health Disparities and Cultural Competency assessment was 76%, which increased to 78% post-training. Self-efficacy scores showed significant improvement across all 14 items measured, with all CHWs reporting high confidence in their ability to perform all 14 skills post-training (Table 3). Pre-training self-efficacy scores ranged from 2.67 to 5.30 on a scale of 0 to 10, with the highest self-efficacy in asking the right questions to identify medication use practices for prescribed medications (mean=5.30) and the lowest in explaining the MTM program to others within the CHWs' organization (mean=2.67). The mean improvement from pre-training to post-training ranged from 3.59 to 5.57, with the greatest improvement observed in explaining the MTM program to others within the organization (mean improvement=5.57). The percentage of CHWs who felt highly confident (scoring at least 7 out of 10) in performing each skill at the end of the training program ranged from 86% to 97%, indicating that most CHWs were highly confident in performing the 14 skills (Table 3).

The quality assurance process where student pharmacists reviewed CHWs documentation following interactions with actual patients was helpful in identifying gaps in CHWs skills in performing medication adherence patient workups. Every CHW had at least 1 deficiency cited by the student pharmacist. Examples of deficiencies included poor documentation, insufficient probing of the patient to uncover specific adherence barriers, the use of a self-medication such as herbal medications, or insufficient probing of the patient to uncover detailed information about how patients take medications daily. Uncovering these gaps led to one-on-one tutorials to address areas of concern. Student pharmacists monitored CHWs in subsequent patient encounters for improvement.

Eighty-seven of the CHWs completed remediation training 3 to 4 months following the live training program, where they met in small groups to practice the MTM process on a simulated patient case. Sixty-eight of the CHWs correctly documented or performed in all skill areas, and the remainder correctly documented or performed more than 80% of the tasks.

Table 3. Self-Efficacy for Activities/Tasks Related to MTM

Self-efficacy item	Mean pre-training ± SD	Mean change score ± SD	Percent post score highly confident [b]
ID and enroll patients			
Identify a patient that is eligible for MTM Service	3.65±3.17	5.19±3.74[a]	95
Explain the purpose of the MTM Service to a patient	3.73±3.73	5.35±3.75[a]	95
Motivate a patient who is not interested in MTM Service	3.40±3.20	4.84±3.53[a]	92
Provide services			
Gather necessary patient-specific data from the treating physicians for MTM encounter form	4.05±3.16	4.62±3.69[a]	92
Gather necessary prescription data from the pharmacy for MTM encounter form	4.43±3.43	5.24±3.65[a]	95
Determine the level of literacy using a validated system	4.24±3.41	3.59±3.58[a]	89
Ask the right questions to identify medication use practices for prescribed medications	5.30±3.52	4.84±3.22[a]	97
Ask the right questions to uncover barriers that affect the use of prescribed medications	4.35±3.12	4.30±3.42[a]	95
Ask the right questions to identify medication use practices involving self-medication	4.89±3.43	4.32±3.51[a]	95
Perform a medication reconciliation to establish a complete and accurate medication list	4.89±3.39	4.27±3.96[a]	92
Apply motivational interviewing techniques to improve medication use practices	4.72±3.37	4.46±3.23[a]	92
In collaboration with the pharmacist, verbally communicate recommendations to a patient	4.40±3.27	3.76±3.41[a]	97
Explain MTMS to others within your organization	2.67±2.94	5.57±3.19[a]	86
Document services			
Appropriately document information on the encounter form for pharmacists to review	4.54±3.35	5.24±3.12[a]	92

[a]Improvement in self-efficacy from pre-training to post-training periods was statistically significant ($p < 0.0002$), based on analysis of pair t-tests.
[b]Highly confident was a score of at least 7 on a scale ranging from 0 (cannot do at all) to 10 (highly certain can do).
MTM, Medication Therapy Management.

DISCUSSION

This study shows the effectiveness of a structured training program in improving CHWs' knowledge and self-efficacy in medication adherence support. The significant improvements in knowledge scores and self-efficacy suggest that the training successfully prepared CHWs with the necessary skills to address medication adherence issues in their communities and collaborate with the healthcare team. These findings build upon previous research about CHW training programs related to medication management. For example, Jam and colleagues[31] shared findings from a cross-sectional survey of 77 CHWs, which assessed CHW confidence and training gaps in medication management. They found that only 18% reported having received training about medication adherence and that more than half of CHWs said their confidence in providing medication management services was either poor or fair. The literature review found few reports of CHW training programs specifically focused on medication adherence, with most involving pharmacy technicians who had been cross-trained as CHWs.[32–35]

The approach of combining pre-recorded lectures with live case-based interactive sessions taught within small groups of CHWs aligns with best practices in adult learning theory and mirrors successful approaches used in other health professional training programs. This blended learning approach has been increasingly recognized as effective in healthcare education.[36] Liu et al.[37] conducted a systematic review of blended learning in health professions, finding that it was more effective than, or at least as, effective as non-blended instruction for knowledge acquisition in health professions.

The use of case-based learning in small groups is supported by Thistlethwaite and colleagues[38] who found in their systematic review that case-based learning is enjoyed by students and teachers and leads to improved learning outcomes in terms of clinical reasoning and knowledge. This approach is particularly relevant for CHWs, as it allows them to apply theoretical knowledge

to practical, real-world scenarios they might encounter in their communities. Moreover, the focus on interactive, hands-on training aligns with the findings of Bluestone et al.[39] who found that interactive methods, including case-based learning and hands-on practice sessions, were more effective than traditional didactic methods alone. The incorporation of pre-recorded lectures as part of a flipped classroom model is supported by research from Hew and Lo,[40] who found that flipped classrooms were either more effective than, or as effective as, traditional classrooms in terms of academic performance and student satisfaction.

Given their prior training and experience, it was expected that CHWs would perform well on pre-program assessments of health disparities and cultural competence. However, their post-program assessment scores did not show significant improvement. This could be attributed to the broader scope of the questions, which focused on general health disparities and cultural competence rather than the specific cultural beliefs and values about medications covered in this training program. In addition, the minimal improvement in scores may indicate that CHWs already possessed a relatively high level of competence in these areas before the training began.

The inclusion of cultural competency and health literacy in this training addresses a critical need identified in urban ambulatory settings, particularly for hypertension care among underserved populations. Mueller and colleagues[41] showed that culturally competent care can significantly improve blood pressure control in minority populations. Furthermore, Jolly et al.[42] emphasized the role of health literacy in patient engagement and self-management of chronic conditions like hypertension. By equipping CHWs with these skills, the study aimed to bridge the gap in care for underserved populations. This approach aligns with findings from Kangovi and colleagues[43] who showed that CHWs trained in cultural competency and health literacy can improve chronic disease management. Integrating these competencies in CHW training also addresses the broader social determinants of health, as outlined by Marmot,[44] who argued that cultural factors and health literacy are crucial in reducing health inequities. Covert et al.[45] proposed a set of core competencies for CHWs, and a focus on medication adherence in conjunction with health disparities would support the disease prevention and management competency. By focusing on these aspects, this training program aims to improve individual patient outcomes and contribute to the larger goal of health equity in diverse communities.

The quality improvement process, involving ongoing support and feedback from student pharmacists and training remediation, ensures continuous learning and improvement beyond initial training, emphasizing the importance of structured support and iterative improvement in CHW training.[46] Moreover, our continuous improvement approach reflects best practices identified by Kok and colleagues[47] emphasizing the need for ongoing supportive supervision and performance appraisal to maintain and improve CHW effectiveness. Allen et al.[48] also showed that continuous quality improvement initiatives lead to better health outcomes and increased job satisfaction among CHWs. The experience shows that this process is essential for identifying training gaps and addressing deficiencies in critical skills for medication adherence patient workups.

Limitations

Although the authors of this study are confident in the training program's efficacy in improving knowledge and confidence among CHWs, some challenges were uncovered. Some CHWs did not fully engage with the at-home self-study materials before attending the in-person program. To address this, the study implemented a short quiz on the subject matter before the training sessions, allowing the authors to identify and assist those who performed poorly. Further, some CHWs struggled to master motivational interviewing based on their performance, as assessed by the facilitator using a rubric, on a simulated patient during the remediation training exercise and instead relied on their own learned experiences. The limited MI training was insufficient for some CHWs. Future training programs should offer more intensive motivational interviewing training for those CHWs who need it.[49] The study did not reassess the primary measures of knowledge and self-efficacy at any point other than before and immediately following the training program to determine whether the improvement in knowledge and self-efficacy was sustained. However, the study did check on skill performance during the remediation training, which was held about three to four months following the training, which showed that all trainees correctly documented or performed in most skill areas.

The CHWs in the training program were experienced professionals, many with prior training in social determinants of health and cultural competence, and some held CHW certification in Florida. Our MTM training was designed to complement their existing knowledge and skills, not replace comprehensive CHW training curricula, which is commonly taught over many weeks. Future studies should explore the optimal duration and format of such training programs and strategies for ongoing education and support for CHWs.

CONCLUSIONS

This structured training program, through a multi-faceted evidence-based approach, effectively improves CHWs' knowledge and confidence in supporting medication adherence for hypertension patients.

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SUPPLEMENTARY MATERIALS

Supplementary material associated with this article can be found in the online version at doi:10.1016/j.focus.2025.100338.

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