Community health worker perspectives of an academic-community Medication Therapy Management collaboration

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Abstract

Objectives: To qualitatively assess community health workers' (CHWs) perceptions of the challenges and benefits associated with participating in a collaborative, interprofessional medication therapy management (MTM) program for rural, underserved, predominantly Latinx, patients with diabetes and/or hypertension.
Methods: Nine CHWs participated in a one-hour, semi-structured focus group that explored their experiences in assisting in the delivery of MTM services through an academic-community partnership between an MTM provider and participating rural clinics. The focus group audio recording was transcribed and analyzed thematically by two independent reviewers.
Results: All program-involved CHWs participated in the focus group. Qualitative analysis identified two overarching themes: (1) opportunities; and (2) challenges. Opportunities were further sub-categorized as benefits to: (a) CHWs; (b) patients; or (c) academic-community MTM research. The CHWs perceived that they served as a liaison between the medical provider (prescriber), patient and MTM pharmacist. The benefits to the patients focused on integration of the CHWs as essential to patient recruitment, especially for those who were reluctant to participate or receive a phone call from a stranger. The major challenges identified were: (a) interruptions to workflow; and (b) communication between CHWs and the health care practitioners (physicians/nurse practitioners/pharmacists). Specifically, the CHWs universally agreed that they needed more time between receiving their patient report, scheduling a visit with the patient, and communicating with the patient's provider to better understand the individual's circumstances and needs.
Conclusion: This study identified perceived opportunities and challenges for CHWs and chronically ill rural Latinx patients in the acceptance of MTM. These findings may be useful for all interprofessional healthcare team members to better understand and appreciate the role of CHWs while simultaneously enhancing and improving respective medication adherence efforts, and to improve collaborative, academic-community collaborative programs in the future.

Key points

Background:

- Pharmacists and community health workers (CHWs) have been demonstrated to increase access to and quality of care for underserved, rural-dwelling individuals with chronic diseases through medication therapy management (MTM).
- However, the impact of pharmacist-community health worker collaborations for chronic disease management has not been well documented from the perspective of CHWs.

Findings:

- A focus group performed with CHWs who had collaborated with an MTM telehealth program in a rural, underserved, predominantly Latinx area found that the CHWs perceived both benefits and challenges to collaboration with pharmacists.
- CHWs believed that their role in interprofessional, team-based care for MTM improved patient acceptance of these services; however, better means of communication are necessary, as is greater recognition of the role of CHWs in MTM success.

Background

The shortage of primary care providers in rural communities in the United States (U.S.) is well documented, as is the higher prevalence of chronic disease and greater associated burden experienced by rural populations.[1] Accordingly, rural pharmacists play an essential role in their communities as accessible care providers who can offer drug-related information, ensure and promote patient safety, and provide education and counseling to patients about their medications and chronic conditions.[2] Rural patients may require additional support services beyond those provided by traditional health systems and providers to address the commonly encountered barriers to care. As such, innovative models integrating pharmacists and community health workers (CHWs) have been successfully implemented in diverse community settings and across chronic disease states.[3,4] Moreover, research indicates that integrating a CHW into diabetes care is associated with improved self-management and significant decreases in average blood glucose.[5-7] However, the impact of these collaborations between CHWs and pharmacists in the general context of chronic disease management, and in pharmacist-provided healthcare delivery specifically, is not well understood and has been documented primarily from the pharmacist's perspective.[4]

CHWs are lay health educators who have assumed a wide variety of healthcare-related roles and responsibilities including providing health education, serving as community and patient advocates, facilitating increased access to healthcare resources, and assisting in research activities.[8] The Health Resources and Services Administration (HRSA) conducted the Community Health Worker National Workforce Study and identified five categories of CHW roles: (1) member of healthcare delivery team, (2) navigator, (3) screening and health education provider, (4) outreach-enrollment-information agent, and (5) organizer. In their role as a

member of a health care team, CHWs aid patients in the day-to-day management of conditions like diabetes and hypertension.[9] As a result, an essential relationship is created between CHWs and the clinical pharmacists, as well as the entire healthcare team, who provide medication-related expertise.

Medication Therapy Management (MTM), performed by pharmacists, is provided to qualified Medicare beneficiaries with chronic diseases,[10] most often diabetes or hypertension. However, uptake of these services is limited by patient awareness[11] as well as cultural and regional factors.[12] Patients may feel uncomfortable with pharmacists providing MTM or other services including hypoglycemia education, vaccination recommendations, or other advice not perceived as directly related to dispensing medication, [13] particularly if the service providers are not from the local community. These perceptions may be even more prevalent where pharmacist-delivered services utilize telephonic or other non-face-to-face modalities.[14] This may be further compounded in rural and/or Hispanic/Latinx communities, where lack of culturally and linguistically appropriate care,[15] sociocultural barriers to self-advocacy,[16] and low familiarity with the healthcare system may reduce utilization of MTM services. [16-18] However, familiarity with and acceptance of CHWs as approachable and accessible healthcare advocates may positively influence MTM success.

CHWs enhance patient comfort and trust with MTM and other services provided by pharmacists. A clinical study integrating CHWs' role in diabetes management showed that utilizing a bilingual lay health educator, who communicated with both patients and pharmacists, resulted in improved management[19] although this relationship was inconclusive in a larger study.[16] A recent four-year, multisite analysis of provision of comprehensive MTM services to rural patients, delivered by an academic-based provider, utilized CHWs at several sites electing

to implement respective programs or use resources from existing patient advocate programs. Incorporating CHWs into the MTM care process may improve patient outcomes, [20-22] however, the mechanism by which CHWs influence MTM success, particularly in the context of an academic-community partnership, is not well studied.[22]

Objective

The objective of this qualitative research was to assess CHWs' perspectives of the benefits and challenges associated with participating in a collaborative, academic-community partnership to provide MTM services to patients with diabetes and/or hypertension in state-designated rural counties.

Methods

MTM Program Description

The underlying pharmacist-delivered, telephonic MTM program that evaluated outcomes of an academic-community partnership in provision of comprehensive services to rural patients with hypertension and/or diabetes, is described in detail elsewhere.[23] Briefly, the MTM program included Medicare beneficiaries referred to the program by a community-based provider, given a current diagnosis of diabetes and/or hypertension. All beneficiaries were followed for one year and had at least two MTM appointments with an academic center-based pharmacist during the program period. One participating community health center site, located along the US-Mexico border, has used CHWs in many aspects of their center's care delivery, including providing culturally sensitive patient education for health promotion and disease prevention and assisting patients as healthcare and social system navigators and advocates. At this particular site, CHWs were recruited to assist in implementation of the MTM program including patient recruitment and delivery of services. CHWs were present in the patient's home during the comprehensive

medication reviews to: assist the patient in medication reconciliation, ensure patient understanding, and document any recommendations made during the telephone call and communicate these recommendations to the patient's clinical provider.

Focus Group Participants

All CHWs affiliated with this one site were eligible to participate in the focus group study. Participating CHWs were sent an email inviting them to participate; the CHW coordinator then identified the most convenient date and time to conduct the focus group.

Focus Group Design and Administration

The perspectives of participating CHWs were assessed using a single-phase, semi-structured focus group discussion conducted in September 2015. Based on the study objectives, eight scripted questions (Appendix) were developed by a research team with expertise in focus-group design and MTM research. The focus group was conducted telephonically in English with a Spanish translator (to ensure full participation from the CHWs), and lasted approximately one hour. The CHWs, CHW coordinator and translator were all located in a conference room at the participating clinic site while the moderator and a note-taker were located at the academic center. Before the focus group began, all CHWs were advised that their participation was voluntary and that they could withdraw from the focus group at any time; and their responses would remain anonymous and confidential. The focus group was audio-recorded and later transcribed by a bilingual translator: to enable clarification of individual comments and key issues; redact personal identifiers; and for verification purposes. The Institutional Review Board of a large university deemed this project a program evaluation.

Data Analysis

The transcript of the focus group and notes were reviewed by study personnel. The first author quality-checked the transcription to verify the accuracy of the data. The transcription was then analyzed using an analytic induction method to independently identify and characterize common themes, detected by coding.[24,25] Two independent reviewers coded the transcripts by hand to identify themes, while a third reviewer facilitated resolution of any discrepancies. Individual themes were compared among the team and major themes were identified, representing the CHWs' perceptions of the academic-community partnership in provision of medication management services to rural, underserved patients with hypertension and/or diabetes. The reviewers then identified prominent categories of comments within the major themes. Given the sample homogeneity, it was impossible to identify specific participants from the transcription, ensuring their anonymity.

Results

Overview

Two major themes were identified from the qualitative analysis: (1) benefits presented by the collaborative academic-community partnership in provision of telephonic-based MTM services; and (2) challenges encountered in provision of these services. See Table 1 for the themes, context, categories, and comments identified by the independent reviewers.

All program-related CHWs (n=9) participated in the one-hour focus group. Almost all of the CHWs were women (n=8), all were predominantly Spanish speaking (as were their patients), and all had worked with patients enrolled in the first year of the MTM program. Demographic characteristics of individual participants were not collected, to preserve their anonymity during the focus group.

Benefits

The CHWs' comments reflecting opportunities were further categorized as benefits to: (a) CHWs*;* (b) patients; and (c) academic-community research.

Benefits to CHWs: CHWs identified that the program increased their knowledge of chronic diseases; generally, they expressed improved familiarity with the medications used to treat diabetes and hypertension and more specifically, medication names, common dosages, and drug safety issues. One CHW mentioned that during a patient home visit for a medication reconciliation appointment, she was able to identify that a patient was taking the wrong dose of a medication and that the medication was past its expiration date. She felt empowered to educate the patient about these risks and followed up with her for future clinic visits.

Furthermore, CHWs expressed feeling increased self-efficacy and confidence as a result of participating in the program, empowering them to address medication use with patients. CHWs explained that they had previously felt uneasy and uncomfortable asking patients about their medications, yet now could have more in-depth conversations with them regarding their medical condition(s) and respective treatment(s). One CHW commented that he/she identified a patient who was not taking the medication as prescribed, and subsequently felt more confident to tell the prescriber about the patient's situation, that subsequently resulted in a medication change.

Moreover, the CHWs noted that the program provided them with access to the academic center-based pharmacists, who served as a trusted source of information regarding chronic diseases and medications, even beyond the MTM project. The CHWs also agreed that they liked the additional connections made between the academic center pharmacist, and the clinics' prescribers and staff. As a result of participation in the program, the CHWs said they began to recognize that they played a valuable role as a liaison between the medical provider, patient, and MTM pharmacist.

Benefits to patients: Several CHWs commented on the positive patient health outcomes they observed as a result of the program. One CHW described an encounter where a patient was complaining of dizziness. During the medication reconciliation visit, the CHW and pharmacist learned that the patient had recently changed providers and had duplicate prescriptions for an anti-hypertensive medication and thus, was taking twice the amount of her prescribed dose. When the issue was resolved by the pharmacist and CHW, the patient remarked on a follow-up visit that she was doing so much better and was not periodically stopping the medication because of the previously experienced side effects.

Another CHW commented that many patients did not understand why they were prescribed their medication or how to take it correctly. Moreover, patients were not communicating to their primary care provider how they were taking their medications nor that they were having issues or experiencing side effects.

All of the CHWs commented that participating in the MTM program had a positive effect on their patients; the patients told the CHWs that it made a difference to know that someone from outside of their community cared about them, called them, and took the time to review their medication(s). One CHW commented that patients appreciated knowing that someone else cares about their condition(s) and appropriate medication use. Another CHW commented that patients felt more empowered to candidly speak with their primary care provider about medications and adherence.

Finally, the CHWs commented that they noticed a benefit for patients that the pharmacists reiterated similar chronic disease messages surrounding the benefits of physical activity and nutrition. The CHWs appreciated the consistency in the pharmacist's message with regard to managing chronic disease, and thus, improved the CHWs credibility with patients.

Benefits to academic-community research: CHWs expressed that many of their patients were initially reluctant to participate in the MTM program, and that integrating CHWs in the process was an essential recruitment tool. One CHW explained that several patients were apprehensive about receiving a telephone call from a stranger. Subsequently, the CHW explained that it would be a pharmacist from the academic center calling to review medications and talk about their health. According to the CHWs, the best way to encourage greater participation in the program was to reassure the patient that the CHW and pharmacist were working collaboratively.

Challenges encountered in the provision of MTM services

The CHWs' comments reflected that communication between themselves and the health care practitioners (physicians, nurse practitioners, and pharmacists) as well as with patients, was the major challenge. Within this theme two subcategories emerged: (a) difficulties with patient tracking and workflow; and (b) difficulties communicating with the MTM pharmacist particularly with regard to patient tracking. For example, the CHWs would unsuccessfully attempt to reach a potential patient, and consequently remove that patient from the participant inclusion list. However, the MTM pharmacists' list was not updated, thus that patient was still included on any lists or reports provided to the CHWs by the MTM pharmacist. Additionally, the CHWs mentioned that it was challenging to accommodate their program-related work if they were not given the patient list in a timely manner, as it interrupted their day-to-day planning and workflow. Moreover, the CHWs universally commented that they needed more time between receiving their patient report, scheduling a home visit with the patient, and communicating with the patient's provider to better understand the patient's individual circumstances.

Discussion

Overall, CHWs reported positive perceptions about their participation in an academic-community collaboration to provide MTM services to rural, underserved patients with diabetes and/or hypertension. They described improvement in: patient care and outcomes; self-efficacy and competency; and better understanding of their role as a liaison between pharmacists and patients. As clinic employees charged with patient education responsibilities, the CHW's familiarity with pharmacy services and medications, as a result of their participation in the MTM program, improved the health promotion and prevention education activities with their patients; this newly acquired knowledge, coupled with their ability to aid patients as a navigator and advocate, was mutually beneficial for both parties. Moreover, the CHWs were an essential part of the success of the overall program as a result of facilitating patient recruitment and retention, by serving as a local healthcare advocate regarded with high trust and cultural sensitivity within the rural, border community. This important connection between the CHW and academic MTM pharmacist highlights the respective roles and responsibilities in facilitating and supporting community-based programs and the importance of establishing these types of partnerships to provide innovative solutions in MTM service delivery.

However, participating in the MTM program did present workflow and communication challenges for the CHWs. These findings align with previous studies who have identified challenges in incorporating CHW's into MTM services. Specifically, previous work identified that MTM pharmacists were unfamiliar with the role of the CHW in delivery of care to patients and they were concerned about maintaining patient confidentiality in interactions between the CHW and the patient.[4] This study addressed these challenges by having the CHWs participate in the MTM pharmacist consultations in the patients' homes. Moreover, the CHWs were clinic employees and, as such, were versed on the importance of patient confidentiality given that they

had access to protected patient information outside of the MTM program. Moreover, CHWs assisted in following up with local clinic providers about recommendations, thus, their roles and responsibilities related to patient information sharing were established from the outset and reiterated to the pharmacist participating in the MTM program.

Limitations

This evaluation had several limitations. A major limitation was that the focus group discussion involved CHWs from only one of the four participating sites involved in the larger project during the first year of the program. Thus, only the insights and opinions of one program site were captured given its unique inclusion of CHWs, limiting the generalizability of these results. Additionally, while the focus group included all the participating CHWs from the site, they may have been overly influenced by their peers, inflating the agreement of answers provided to focus group questions. However, undue influence from the academic MTM center was mitigated by using researchers completely uninvolved from the delivery of patient care to moderate and serve as note-takers at the focus group.

Conclusion

In this study, CHWs overwhelmingly recognized value in establishing a collaborative, academic-community partnership to implement medication therapy management (MTM) services for rural, underserved Spanish speaking patients with hypertension and/or diabetes. These results may help promote and foster interprofessional, team-based care integrating CHWs and healthcare providers, in addition to providing much needed insight to better understand and appreciate the role of CHWs. Moreover, this study suggests that academic-community partnerships may be mutually beneficial in improving patient care as well as CHWs' confidence and self-efficacy in collaborative service provision and research.

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Table 1: Classification of themes identified by reviewers from the focus group discussion

Themes	Context	Categories	Comments
Theme 1: Benefits presented by the collaborative academic-community partnership in the provision of Medication Therapy Management (MTM) services			
Benefits to Community Health Workers (CHWs)	Increased clinical skills	Improved knowledge of chronic diseases Improved knowledge of medications: names, common dosages, and drug safety issues	I think overall **it's a good**, it's a **positive**, you know, experience for the patient so they **get the feeling that somebody else cares,** you know, not just the provider and not just the [CHW], you know, the family care coordinator, but there's somebody out of this town that cares about them, you know, **somebody from somewhere else is calling them and checking on them and has reviewed their medication** and that patients that I have a chance to work with, they already like that so then somebody […] calls me, and they call from [the city]… **somebody calling from out of town, so I think it made them feel good that somebody else cares about their condition and how they're handling all their medication.**
	Professional relationship with pharmacists	Communication about patient medication issues- saw the pharmacist as a partner and recognized CHW role between the providers and the patient- like a patient pharmacist liaison	
Benefits to patients	Positive health outcomes	Improved overall health at follow-up visits Improved emotional health - seeing people outside the community take an interest Improved medication adherence	What I can say is that the **patients were given more confidence that they are able to go speak to their PCP [primary care provider] without being afraid** that, you know, "I didn't take my medication" or "you're supposed to take it this way." **They have more freedom to be able to go talk to their PCP and tell them how they felt about their medications.**
Benefits to academic-community research	Recruitment and retention of patients in research and community outreach	Patients were not sure about getting call from stranger - having CHWs to facilitate MTM services enhanced trust	
Theme 2: Challenges encountered in the provision of MTM services			
Challenges: Workflow	Multiple and new responsibilities	Duplication of activity Scheduling home visits for medication reviews-	I can't schedule my patients visits if I don't get a correct patient list One thing that I noticed is that sometimes when I get the report, that **I would get the report this morning and there was a baby scheduled to be seen that day.** I didn't get enough leeway. **At least a few days to plan** for because we have a lot of activities and the providers you know the providers have too and **sometimes they didn't give us enough time to plan and to schedule you know for the patient to be taken care of.** I couldn't get ahold of a patient and I would remove them from the list, but then my next patient list would still have them Needed more time between getting a patient report, scheduling time to visit with the patient and following up with the patient's provider
Challenges: Communication	Participant tracking	Timing of patient reports and scheduling visits Failure to update patient participant lists	