

Community Health Worker Integration Into the Health Care Team Accomplishes the Triple Aim in a Patient-Centered Medical Home A Bronx Tale

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Abstract: Community health workers are ideally suited to the care coordination niche within the patient-centered medical home (PCMH) team, but there are few case studies detailing how to accomplish this integration. This qualitative study documents how community health workers (CHWs) were integrated into a PCMH in South Bronx, New York. Results show that integration was linked to clear definition of their care coordination role within the care team, meticulous recruitment, training and supervision by a senior CHW, shared leadership of the care management team, and documented value for money. By helping the team understand patients' backgrounds, constraints, and preferences, they helped everyone genuinely focus on the patient. **Key words:** *care coordination, community health worker, medical home, patient-centered*

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The authors thank the staff of the Department of Family Medicine for so generously sharing their time and knowledge, in particular, Romelia Corvacho, Maria Murphy, Paul Beach, Angeline Thomas, Janice Void, and Maryanne Jonitis. They also thank the New York State Health Foundation for its generous support and in particular Yasmine Legendre and Jacqueline Martinez Gracel, for their advice.

The authors have disclosed that they have no significant relationships with, or financial interest in, any commercial companies pertaining to this article.

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DOI: 10.1097/JAC.000000000000011

THE US outspends any other nation on health care but falls behind on many measures of health (Onie et al., 2012; Squires, 2012). One approach to achieve better health outcomes at lower cost is through patient-centered medical homes (PCMHs). Using team-based care, the PCMH must ensure that patients' needs are considered first and foremost, be readily accessible, and provide comprehensive and coordinated care, the "triple aim" (Adair et al., 2012; Markova et al., 2012). The PCMH team includes physicians and nurses for medical care, psychiatrists for mental health care, and social workers for counseling and referrals to social services (Manahan, 2011; Volkmann and Castanares, 2011). These differentiated roles require coordination to ensure seamless, continuous, and patient-centered care. Researchers have recommended that this coordination role be filled by nonmedical personnel (Solberg, 2011).

Community health workers (CHWs) appear ideally suited to the care coordination niche of the PCMH, particularly for underserved, minority populations facing cultural and linguistic barriers to care (Martinez Garcel, 2012; Volkmann and Castanares, 2011). Community health workers develop a trusting relationship with patients, serving as a 2-way liaison between the community and health care system, and there is ample evidence of their contributions to improved health outcomes, especially among those with chronic illnesses (Babamoto et al., 2009; Balcazar et al., 2009; Brownstein et al., 2007; Bryant-Stephens et al., 2009; Cherrington et al., 2008; Findley et al., 2011; Krieger et al., 2009). Importantly, CHWs help reduce health care costs by decreasing emergency department (ED) visits and hospitalizations (Balcazar et al., 2011; Gilmer et al., 2007; Ingram et al., 2008; Krieger, 2009; Rush, 2012; Waxmonsky et al., 2011). Thus, CHWs are well-positioned to encourage those marginalized from the health care system to seek care at the PCMH (Epstein et al., 2010; Herman, 2011; Volkmann and Castanares, 2011).

There is little research around the specific roles of CHWs in team-based settings (Cherrington et al., 2010; Farquhar et al., 2008; Keller et al., 2011) and on how CHW roles fit within the overall division of care within the PCMH (Crabtree et al., 2011). This study of the integration of CHW into a family medicine PCMH in the Bronx, New York, addresses these gaps.

METHODS

This qualitative study documents the multiple changes needed to successfully integrate CHWs into the Bronx-Lebanon Hospital Department of Family Medicine's PCMH (BLDFM), in South Bronx New York, a very low-income community with persistent inequalities in health. We used a comprehensive set of questions concerning the roles of CHWs, the institutional environment, and relationship with other providers to understand factors necessary to CHW success. Using the questions as a guide, we interviewed 7

key individuals, 4 of whom were interviewed multiple times. In addition, we obtained relevant documentation from the department and the hospital human resources office regarding job descriptions, recruitment processes, training modules, evaluation, and tracking forms. The interviews and materials were mapped back to the original framework questions that served as the basis of this report.

RESULTS

The rationale for integrating CHWs as core members of the medical team

The Chair of Family Medicine became concerned that providers could not achieve lasting health improvements for patients with complex issues. After covering basic diagnostic and treatment issues, medical providers had no time for meaningful discussions with patients. Furthermore, providers could not reach patients who did not come for care. A member of the department with extensive experience with CHWs in Haiti proposed that they turn to CHWs to introduce the missing care management elements.

Building institutional support for the CHW model

The BLDFM CHW program was launched in 2007. Initially, hospital leadership was disinterested in the CHW model, but the Departmental Chair used a combination of enthusiasm, persistence, and regular communication to gain support first from the Family Medicine team and then from hospital administration. He reported frequently on development and implementation of the program. Positive feedback on the Bronx-Lebanon CHW program from leaders of other hospitals further validated the CHW program. As soon as patient outcome data became available, the Department's preliminary calculations showed that the CHW program return on investment was more than \$2 per 1\$ invested. This evidence clinched the hospital administration support for the CHW program. The managed care organization (MCO) for a majority of Bronx-Lebanon patients used their patient

outcome analysis of hospitalizations and ED utilization for ambulatory care-sensitive conditions to further enhance support for the CHW program, which they saw would positively impact their Quality Assurance Reporting Requirement scores and therefore their income.

Key steps in establishing the CHW as part of the medical home

Establishing CHW positions

Initially, CHWs were hired as “health educator” contractors because the hospital’s Human Resources department did not have any CHW positions. When Human Resources added the CHW job category, the department then hired CHW directly as full-time hospital employees.

Supervision

Initially, the physician who introduced the CHW model to Bronx-Lebanon served as the CHW program director. The department chair took over supervising later to reduce confusion concerning the chain of command for CHWs.

Funding

The initial 2 CHW positions were grant-funded. When 2 more positions were added, the department used private funds. In 2012, the hospital administration formally added and funded 7 CHW position slots.

CHW’s given responsibility for care management

The nurse case-manager model (Piekes et al., 2012) was too costly for the patient population seen in South Bronx, and for this population peer support for care management appeared preferable (Brownstein et al., 2007; Krieger et al., 2005; Nemceck and Sabatier, 2003; Swider, 2002). Therefore, the primary role of CHW became care management. Supporting this primary role, the CHWs also help their clients connect to services with community partners, facilitate appointments through phone outreach, follow-up and escort as needed, and visit the patients in the home. During these visits, CHWs incorporate coaching on the self-management activities as

identified by the patient’s goals for accomplishing the activities recommended by the PCMH team. Each CHW works with an average of 33 patients per year and are expected to make 2 home visits per day and 3 joint clinic/hospital visits per day.

Recruitment

An initial interview narrowed the applicant pool to those CHWs who were friendly and communicative, fluent in 1 or more languages spoken by the patients (Spanish, French, South Asian languages), natural helpers, able and willing to serve as role models, and courageous advocates for the community. The second recruitment step was to provide a “pre-training” for these potential CHW candidates. During this training, participants could decide if they were suited to the role, while the department could observe the best candidates and invite them for second interviews. This 3-step process has led to successful recruitment of CHW candidates, with very few subsequently let go during probation.

Training

All CHWs were trained on the core competencies recommended for New York: outreach and community mobilization, community/cultural liaison, case management and care coordination, home-based support, health promotion and health coaching, system navigation, and participatory research (Findley et al., 2012). Given that communication is key to their work, CHW were trained to use active learning and listening techniques, and how to use verbal and non-verbal cues. They learned how to “power with” rather than “power over” the client, emphasizing coaching approaches. Any disease-focused training was offered through subsequent in-service training, for example, on asthma management or healthy eating.

Integration into the care team

The department used many opportunities to help clinical staff understand how CHWs were being integrated into the care team: Continuing Medical Education courses, rounds with CHWs, team meetings, staff meetings.

Key was the participation of the CHW in routine monthly clinic team meetings. The division of labor was worked out with different members of the care team, so that each knew when and how to involve the CHWs. The aim was for the CHW to be a full member of the medical team, not a secondary member “as needed” or on referral, and this integration became reality over time as all members appreciated CHW contributions to keeping families connected and healthy.

CHW program sustainability

One of the keys to success for the Bronx-Lebanon CHW model was its commitment to continually improve the integration of CHWs as members of the care team. Several key changes improved the fit between the CHWs and other members of the PCMH.

CHW supervisor

A CHW administrator role was established to serve as an intermediary between CHWs and the Departmental Chair. This strengthened the communication of feedback from the CHWs to the Chair, while simultaneously allowing CHWs to receive more focused, timely, and appropriate supervision.

Refinement of the CHW recruitment process

The job description for CHWs was made more explicit, so the department could be more selective of candidates sent to them from Human Resources. The CHW Administrator developed candidate interview questions to better screen potential candidates for the desired attributes, with specific questions to elicit the candidate’s experience in working with the low-income, minority populations typical of the hospital’s patient population and their interaction skills (communication, demonstrating empathy, teaching or coaching, providing support or encouragement). The CHW Administrator and a senior CHW together interviewed potential candidates, so one could observe body language and attitude. This improved selection of qualified candidates.

Regular interactive supervision

The CHW Administrator developed a set of performance evaluation tools to support routine interactive supervision: (a) weekly time assessment by specific task; (b) bimonthly performance enhancement reporting, allowing the CHW Administrator to compare weekly CHW time spent per activity, relative to the CHW group average; and (c) quarterly home visit performance evaluation, with the home visit observed by the CHW Administrator or her senior designate.

The home visit evaluation covers the CHW opener or explanation of visit purpose, efforts to build a trusting relationship, and teaching skills. Depending on the specific activity, the CHW Administrator uses the observations to give encouragement and praise where the visit activity was well done and to discuss steps to improve the visit where the activities were less effective. The supportive nature of this performance evaluation has made it well-received, which in turn generally has led to performance improvement. The 3-month evaluation is particularly critical as this is the end of the probation period. If the CHW does not show adequate productivity or interaction skills, he/she will not pass probation. According to the CHW Administrator, attitude and interpersonal skills are perhaps the most critical element, which leads to failure to pass probation: “You can’t teach attitude or tact.”

The Departmental Chair and CHW Administrator both highly value a supportive work environment for their team. The CHWs are encouraged to be empathic and to interact with patients as peers, avoiding a superior attitude. The CHW Administrator reported that she encourages collaboration and support among the CHWs. She encourages them to solve their own problems, and in the case of conflict or disagreement among the CHWs, she insists they treat each other with respect.

Recognition of CHW team contributions

Departmental leadership has consistently viewed CHWs as assets for the entire PCMH, complementing and enhancing the work

of other team members. Community health workers participate in all departmental care team meetings, where they present detailed patient care narratives focusing on cultural, social, and communication issues. Other team members came to understand and appreciate that CHWs can discover information about the real circumstances of patients' lives that patients do not readily share with other members of the team. Using this information and feedback, the care teams have been able to develop realistic and appropriate care management strategies. As the depth of the connections between the CHWs and patients became evident at weekly team care management meetings, the team recognized their excellent contributions to care coordination. In this way, CHWs have become completely integrated into care teams and the culture of the department, with CHWs often leading care team meetings. When new members are added to the family medicine care teams (eg, resident and attending physicians, nurses, and registrars), the CHWs are introduced as key members of the care team.

Shared group visits with a CHW and physician

Another major innovation of the BLFMD CHW program was adding patient group meetings led jointly by a physician and CHW. The physician and CHW take turns talking with the patients, with the physician focusing on medical questions and the CHW focusing on engaging the patients. The CHW gives feedback to the physician on the nonverbal cues. For example, CHWs alert the physician to cues indicating a patient is not literate. The CHW then coaches the physician on appropriate analogies, examples, and stories to use with patients, without having to embarrass the patient by asking directly about their literacy. The CHW's suggestions help forge better interactions between the patient and physician, which is further strengthened when the CHW encourages physicians to praise patient advances toward treatment goals. The physicians have come to highly value the partnership with the CHW, so much that when a

CHW was out sick, the physician did not want to continue with the planned group visit without the CHW.

Elaboration of care management process

Under the guidance of the CHW Administrator and with feedback from the CHWs, the CHW care management links assessment, interactions, and feedback in a cyclical weekly process. The CHW starts with a psychosocial assessment to gauge mental status or mood, openness to change, activities the patient likes and can do, as well as those he/she cannot do. This assessment is the basis for a dialogue with the patient about their strengths and initial steps to move toward overcoming barriers and improving control of their health problems, namely the patient's goals. The resulting plan is translated into specific activities the CHW can undertake to assist the patient in achieving goals. The plan is reviewed weekly at care management team meetings. As part of their care management, CHW may incorporate into their home visits counseling, role modeling, and coaching on ways to achieve their self-management goals; they may also make phone reminders of appointments or provide an escort service; when accompanying the patients, they also may facilitate patient-health provider communications. Depending on the needs of the patient, CHWs may help patients navigate the health system. The CHW works with the hospital social services and partner community organizations to help the patient address social and economic needs. Each week at care team meetings, progress is reviewed and suggestions for next steps are made, and the CHW follows-up with the patient, again obtaining feedback to document progress toward attaining the patient's goals.

Focus of work on interactions with patients

Almost half of CHW work is devoted to home visits (25%) and outreach and follow-up (16%), with direct interactions with patients, as shown in the Figure. These interactions allow CHWs to build a trusting relationship

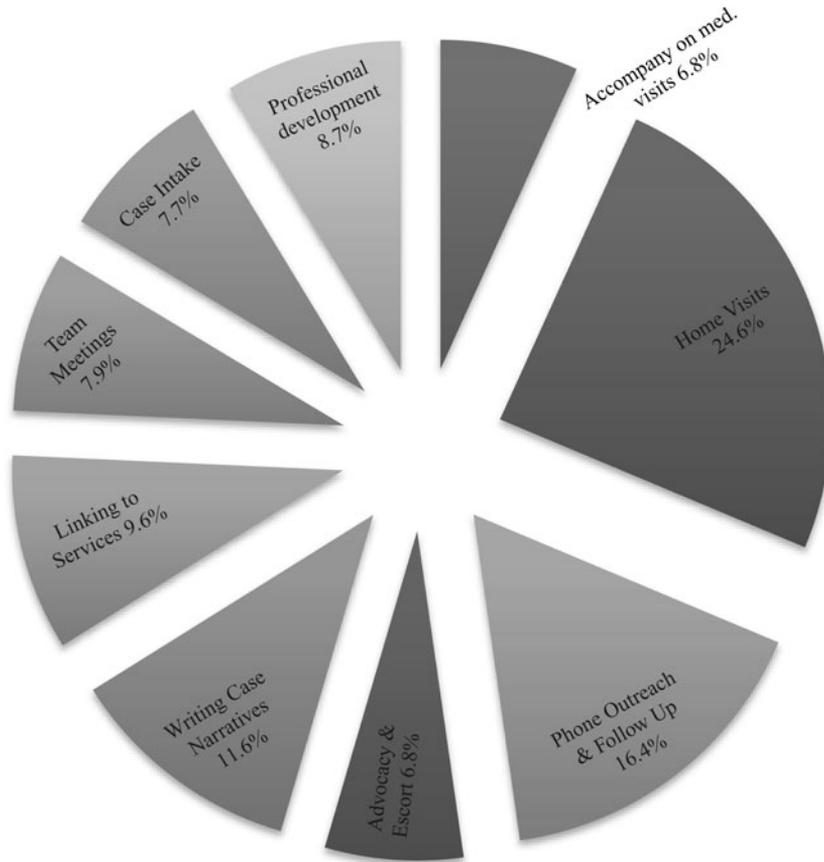


Figure. Weekly CHW time allocation by specific task.

and teach self-care and disease management methods. These interactions aim to support the patient’s progression toward achieving their disease management goals as established in their original visit with the CHW. All CHWs are expected to make 2 home visits per day and 3 joint clinic/hospital visits per day. The balance of time is split among additional activities, including writing up case narratives.

Assessment and feedback of CHW contributions to the BLDFM

Community health workers are evaluated through multiple indicators:

- (1) Weekly performance evaluation: CHWs submit weekly time sheets through which their monthly productivity is calculated for each of the core activi-

ties. The CHW Administrator identifies those who excel and those who fall below the expectations for each task and praises or disciplines accordingly.

- (2) Patient outcome tracking: The department tracks the reduction in hospitalizations and urgent care visits, inpatient denial of payment, and reduced unnecessary admissions.
- (3) Patient narratives: CHW documents how patients have attained their own goals with weekly patient narratives.
- (4) Focus group: The department has conducted focus groups with patients to obtain feedback on the care team.

Community health workers have contributed substantially to improvements in care team productivity and outcomes. Since incorporating CHWs into the care team, ED visits

declined by 5.0% and hospitalizations by 12.6% among patients with diabetes and other chronic health problems. Community health workers generated a net savings of \$1135 per patient, with each CHW generating a net savings of \$170 213 per year. The return on investment was 2.3, meaning that for every dollar invested in the CHW program, the hospital saved \$2.30. These improvements helped the department achieve the additional \$250 per member per month enhanced reimbursement rate for care coordination.

These positive results have been reviewed and shared among the care team members, hospital administration, and other hospital leaders, to publicize the value of CHW contributions. In addition, the Departmental Chair routinely reports CHW program outcomes to Healthcare Effectiveness Data and Information Set, Healthcare Services & Capital and other monitoring agencies.

Key lessons learned

Powerful CHW champion

As others have suggested, a CHW champion among the medical leadership is essential. (Fagman et al., 2011; Herman, 2011; Ramsay and Schneider, 2012) The CHW champion ensures that the administration understands the CHW model and gets physicians and all clinical team members on board with the CHW model.

Empower CHW leadership

Having a CHW as administrator and supervisor for the CHW program was considered vital to the program's success. The CHW Administrator used her own experience to develop all operational details of the CHW program. Community health worker leadership also conveyed to the CHWs the value of their work, and it illustrated the career ladder being established for CHWs.

CHW as care manager leaders

A core function of the CHW is care management, ensuring that the patient's needs are being addressed by the team. In the team meetings, the CHW became the patient's advocate, helping the team to truly stay patient-

centered. Supporting CHWs to lead care management team meetings was key to making the most of the CHW participation on the team. Furthermore, delegation of the coordination role to a nonmedical member of the team freed the medical team members to do what they do best, while simultaneously highlighting the vital contributions CHWs make in their bridging, facilitative, and coaching roles, as suggested by Fagman et al. (2011) and Volkman and Castanares (2011).

Organizational commitment to the CHW program

The CHW program would have been impossible without the hospital administration's commitment to the CHW model. With this commitment, the hospital could institute changes to procedures to accommodate the CHWs, support the program, for example, detailed job description, division of labor in the clinical setting, recruitment criteria and process, and tracking and evaluation of CHW contributions.

Recruitment processes favoring the "right" people

Being a good CHW requires engagement and dedication, and not everyone can be a CHW (Findley et al., 2012). Therefore, hiring the "right" people required selection criteria and a recruitment process focusing on identifying individuals with the attributes for being a good CHW: empathic, natural helper, communicator, and experienced in the community culture. Otherwise, departmental administrators would not have been able to argue against transfers of people to fill a CHW position simply because they were laid off and had nowhere else to go.

Demonstration of improved outcomes and lower costs

Early evidence of the benefits of the CHWs was critical to obtaining organizational, administrative, and team-wide support. The Departmental Chair continuously updated the CHW "balance sheet" and relayed their cost-effective contributions to patient outcomes to hospital management and to the

PCMH team. The Departmental Chair's recognition of these outcomes was critical to garnering support for the CHWs within the care team and in the upper echelons of hospital management.

Train clinical teams on the CHW model

Staff needed to understand the mission and vision of the program. Because most clinical staff had little familiarity with the CHW model, they had to learn how to work as a team with CHW. This training led to better integration of the CHWs, along with elimination of tension between the CHWs and other members of the team.

CONCLUSIONS

Evaluations of PCMHs found mixed results regarding transforming the health care delivery model and truly engaging patients to be proactive partners (Crabtree et al., 2011; Hurley, 2009; O'Reilly, 2012; Piekles et al., 2012; Solberg, 2011). However, Bronx-Lebanon Department of Family Medicine not only was successful in becoming a PCMH, they did so with a transformative process that resulted in satisfaction for both the health team and the patients.

What were the key transformative elements of the Bronx-Lebanon process of becoming a PCMH? According to Crabtree et al. (2011, pp. S33-S34)

True transformation often requires not just a change in roles such as the job description of a medical assistant), but an interdependent and emergent change in relationships among agents. . . . Because any given change actually alters the conditions under which subsequent steps take place, all change strategies require frequent reassessment and tailoring.

The Departmental Chair was committed to transformation, rather than "fixing" problems sequentially. He was a champion of not only the CHWs but also the transformation of the care management process, allowing the team to function well through their participation. The process documented here shows how he created this transformative process, through

regular feedback on each change, seeking suggestions for further change, and allowing for a continuous evolution of the CHW model within the department's PCMH. By the end of this transformation, several features were in place which were not planned initially but which contributed to sustaining the system-wide changes: organizational support from the top down; appropriate CHW recruitment, supervision, and career ladder; clear niche for CHW leadership in care management; routine monitoring of CHW activities and feedback to the team on their contributions; and, most importantly, a change in how the whole health care team functions, with CHW an integral part of that team.

Our case study documents the living, functional nature of the evolved care team at the BLFMD. Before implementing these changes, the care team was not able to engage some of the most needy patients, and those that did come for services were not well-served, with lingering and difficult issues and frequent urgent care visits. Where the medical members of the team wanted to "walk the walk" the constraints on their time, linguistic, and cultural backgrounds made it almost impossible for them to do so. As the CHWs became involved with the team, little by little there were changes in how the care team interacted with patients. Community health workers helped the medical providers see how and where they could change their interactions to be truly more patient-centered. The team which previously was striking out with all too many patients, now regularly got home runs, with satisfied patients supported in "rounding the bases" or taking responsibility for their health and making it to their goal of staying out of the hospital. As suggested by Markova et al. (2012), this team approach led to a completely different style of care.

Dissecting the CHW integration and interactions with other team members, several key features of these interactions explain why their integration was transformative.

- Meticulous recruitment, supervision, and training of the CHWs by the CHW Administrator

- Clear team membership niche for the CHW, including shared leadership of the care management team
- CHW participation in changing the care team
- CHW utilization of adult learning methods with patients
- Documented value for money
- Career incentives and ladder for the CHW, which sustains commitment and performance motivation
- Community engagement to facilitate the advocacy and social justice dimensions of CHW work

Community health worker cannot simply be parachuted into place on the team. A transformation is essential to the long-term success of the model. More than anything else, the CHWs enabled the entire team to see how it

could become more patient-focused, in reality, not in words only. By helping the team understand the patients' backgrounds, constraints, and preferences, they helped everyone genuinely focus on the patient. Thus, the Bronx-Lebanon case demonstrates how the introduction of CHW into the heart of a PCMH can stimulate the transformations needed to achieve PCMH functions. This transformation is reflected in the improved outcomes at lower cost attained with the CHW integrated into their system, returning a net of more than \$2 per dollar invested in the CHW. Integrating CHWs is a systems change, and it was essential that the pertinent system changes sustained this integrated team structure for the long run. None at Bronx-Lebanon would ever turn back the clock to the days before the CHW.

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