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Challenges facing Community Health Workers in Brazil's Family Health Strategy: a qualitative study

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Tables: 1
Word Count: 4,721

Keywords: community health workers, Brazil, primary care, community health, health system,

Abstract

Community Health Worker (CHW) programs are implemented in many low and middle income countries (LMICs) such as Brazil to increase access to and quality of care for underserved populations. CHW programs have been found to improve certain indicators of health, but few studies have investigated the daily work of CHWs, their perspectives on what both helps and hinders them from fulfilling their roles, and ways that their effectiveness and job satisfaction could be increased. To examine these questions, we observed clinic visits, CHW home visits, and conducted semi-structured interviews with community health workers in 7 primary care centers in Brazil-- 2 in Salvador, Bahia and 5 in Sao Paulo, SP-- in which CHWs are incorporated into the work of all primary care health teams. In addition to enhancing communication between the medical system and the community, CHWs consider their key roles to be helping persuade community members to seek medical care and increasing health professionals' awareness of the social conditions affecting their patients' health. Key obstacles that CHWs face include failure to be fully integrated into the primary care team, inability to follow up on identified health needs due to limited resources, as well as community members' lack of understanding of their work and undervaluing of preventative medicine. Increased training, better incorporation of CHWs into clinic flow and decision making, and establishing a clear community awareness of the roles and value of CHWs will help increase the motivation and effectiveness of CHWs in Brazil.

Introduction

Health systems worldwide are utilizing community health workers (CHWs) to improve the health of the populations they serve.[1-5] CHWs are lay people from the same communities they serve who are trained to provide a link between the healthcare system and patients. They often work in low-resource settings.[1,6,7]

CHWs have improved health outcomes across a number of different countries, health behaviors, and conditions.[8-16] Several studies of CHWs in LMICs have also shown them to be particularly effective at addressing stigmatized or feared diseases, such as breast cancer detection in Bangladesh[17] and Mexico, and identification of mental health disorders in Cuba, Peru and the Dominican Republic.[18] Additionally, various studies have shown a marked reduction in childhood mortality by CHWs.[1,10,19-21]

Community Health Workers (CHWs) play a central role in Brazil's universal primary healthcare

system, and other countries have used Brazil's Family Health Strategy as a model for community-based primary care.[22,23] In 1994, Brazil implemented the Family Health Strategy (FHS) to increase access to primary care. Under the FHS, Basic Health Units (BHUs) were established in which community-based teams of one doctor, one nurse, two nurse assistants, and six CHWs provide primary care to approximately 3,500 residents who live in a specified geographic area. The FHS monitors environmental and individual risk factors for disease and provides services such as vaccinations and regular check-ups, prenatal care, and education about communicable and chronic diseases. [24]

According to FHS policy, each CHW is assigned an area with about 700 people. The responsibilities of CHWs include mapping the area, enrolling families in the FHS, updating demographic and health information, and identifying individuals and families exposed to health risk factors.[25] CHWs visit every family in their assigned area at least once a month. The daily routine of CHWs consists of spending 1-2 hours at the clinic in meetings or doing paperwork and the rest of the day completing 10-15 home visits. The scope of their daily activities is wide, from motivating patients to get care and bringing test results to patients, to checking whether patients are taking medications and collecting data for the governmental health database. As links between the community and the clinic, CHWs schedule appointments for individuals with other health professionals and encourage community members to seek care at the clinic. CHWs are required to live in the communities they serve and receive 40 hours of initial training. They are not trained to directly address health needs, but are expected to be the first step in recognizing

health needs in the community.

Studies have investigated the extent to which CHWs in Brazil are effective at improving specific health outcomes and access to healthcare.[26-31] Yet, few qualitative studies have examined the challenges and strengths of CHWs from the perspectives of the CHWs themselves and of the community members they serve.[32-34] To address this gap in knowledge, we investigated three key questions:

1. How do CHWs perceive their role within the Family Health System?
2. What are the biggest challenges CHWs face in their work?
3. What improvements do CHWs believe would help them fulfill their role?

Better understanding how CHWs see their role within the health system, including strengths and challenges, will inform best practices for recruiting, training, and supporting community health workers to improve global health.

Methods

Settings and Participants: In order to understand the perceptions of CHWs across diverse settings, we conducted the study in two distinct settings in Brazil: rural communities in the northeastern state of Bahia; and urban communities within the Sao Paulo City metropolitan area. The two sites in Bahia include Salinas da Margarida, a rural fishing community with a population of 3,000 and Itacaré, a town of 18,000 that relies on both the fishing and tourism industries. Both sites each had one BHU primary care clinic at the time of data collection.[35]

Bahia is one of the poorest regions and has among the worse health outcomes of Brazil. In contrast, the São Paulo sites were low-income, urban neighborhoods in the western region of Brazil's largest city. We interviewed CHWs at 7 BHUs. Each BHU had 2-6 teams. This two-site design allows comparison between CHWs working in different regions and settings within Brazil but operating within a common national policy for their work. Approval for the study was obtained by the the relevant IRBs.

Data collection: In Bahia, we accompanied 12 CHWs on their routine home visits and conducted semi-structured interviews in Portuguese with a convenience sample of fifteen CHWs. We also observed all CHWs throughout their daily work, which included 10-20 home visits with each CHW over a three-month period in 2007. We collected data in São Paulo from May to July 2015 using semi-structured interviews conducted in Portuguese with 57 CHWs who work in five different BHUs. CHWs were recruited through recommendation by the clinic directors as well as convenience sampling. All CHWs in these BHUs were from the communities they served. We observed 20 home visits conducted by CHWs to improve our understanding of the processes and content of these encounters.

Qualitative Analyses: Team members created field notes to capture key themes, quotes, and impressions. Notes were reviewed and discussed by a minimum of three investigators. Data were analyzed using standard coding methods.[36] for qualitative data[37] and the constant comparative method of qualitative data analysis to explore and develop new themes as they arose. Several techniques were used to ensure that data analysis was systematic and verifiable, as

commonly recommended by experts in qualitative research.[38,39] These included standardized coding and analysis of the data and iterative discussion among team members to agree upon shared codes and themes. All members of the research team lived in Brazil for an extensive time, enabling us to build relationships with informants and interpret the data—as well as the contradictions in the data—within the specific cultural and social context. We solicited input from community members and participants to test our emerging results and cultural understanding.

Results

We interviewed 12 CHWs in Bahia and 57 CHWs in Sao Paulo. CHW characteristics are presented in Table 1.

Perception of the Role CHWs Play in the Family Health Strategy (FHS)

Five key themes emerged about what CHWs perceive as their key roles with few differences between CHWs in rural Bahia and urban São Paulo. The two main differences were: 1) CHWs in Bahia spent more time convincing community members of the value of seeing a health professional at the BHU as well as convincing them to integrate western medicine with traditional remedies; and 2) the BHUs in Bahia had significantly fewer resources for CHWs.

CHWs are the eyes and the ears of the health system

CHWs described themselves as being the FHS's "eyes and ears;" their involvement and participation in the community allows them to observe all that is happening in the community and inform health professionals of the community's needs:

I get to know my patients and bring information about them to the team. The doctor can do the physical part but I get to know my patients. Without me, the doctor would not know who is sick in the community. (CHW, Bahia)

For example, when there was a case of suspected meningitis in one neighborhood in Itacaré, Bahia, CHWs immediately informed physicians at the BHU who then intervened.

CHWs see themselves as the hub of information for the health system, gathering and distributing information to community members and health professionals. One CHW described how community members rely on her for the most up to date information about the BHU:

I am a a bridge between patients and the BHU. I am patients' connection to the healthcare center. I can tell them when the clinic opens and how to get an appointment, but I also know if a doctor is on vacation today. (CHW, Sao Paulo)

CHWs bridge social differences between health providers and community members

CHWs describe themselves as "translators" and "bridges" between clinic staff and community members. Since CHWs are from the communities in which they work, they "speak the same language" as community members, understanding colloquialisms and local health sayings and customs. The BHU doctors and nurses commute in from different neighborhoods, often of higher socioeconomic status. One CHW in Sao Paulo explained that the doctors don't always know that when a community member says, "I have something in my eye," they mean they have a cold. Another CHW in Sao Paulo explained that community members wonder if their local

practice of drinking mango with milk is healthy, but are too embarrassed to ask the doctors. CHWs bridge a social divide between their communities and the formal health system.

CHWs persuade community members of the value of the clinic

CHWs lay the foundation for a community member's relationship with the healthcare system. Many community members agree to go to the clinic only after many years and many repeated conversations with a CHW. Through persistence and building a longterm relationship with community members, CHWs can bring individuals into the clinic who might never have come in otherwise. A CHW describes connecting several community members with healthcare for the first time:

> *There are patients that were very closed off, hadn't gone to the doctor in years and years, and we CHWs helped get them into the BHU and seen by medical professionals. They got a lot better, and this is something I took part in as a CHW. Even though the doctor does the care, they never would have had that care without me. (CHW, Sao Paulo)*

CHWs are only able to convince individuals to go to the clinic by building trust over time. Several CHWs described that CHWs must be persistent to persuade individuals to visit the BHU and follow doctor's instructions. A CHW who spent 8 months visiting one community member before she came to the clinic said:

> *[Y]ou have to be persistent. It's like one of those presents wrapped in many layers. Layer by layer, you work through it. (CHW,Sao Paulo)*

Another CHW explained:

> *Look, the work I do is work of love. You have to love it, because it isn't easy. You have to convince those patients who don't want your advice, don't want to follow recommendations, or take their medication. (CHW, Sao Paulo)*

In the Bahia sites, resistance to going to the clinic is augmented by the preference of many community members for traditional medicine. Several CHWs addressed the use of home remedies such as teas that most community members use to treat illness rather than utilizing the BHU:

> *Here people don't like to take medicines and they don't like to go to the doctor. So that makes it harder. They have all their traditional medicines, their teas. It's only when the teas aren't working that they'll take medicine from the clinic. So I insist. I have to insist and insist [they come to clinic]. (CHW, Bahia)*

An added layer of the CHWs' job in Bahia is to show community members how traditional health practices can be used in parallel with the FHS. CHWs have more difficulty persuading community members to go to the doctor when they use traditional medicine at home.

CHWs are witnesses to the social determinants of health: The longitudinal relationship that CHWs have with the neighborhoods they cover is crucial for gleaning important information about health, especially related to social factors such as poverty and interpersonal violence. As

one CHW described:

> *There was a woman in my area who never let me inside her house. She'd peer out of a crack in the door and ask what I wanted. I'd always stop by, and tell her who I was and ask if I could come in. She always said no. Then after a year, she slowly opened the door and let me in. And that's when I saw she had no furniture in her house. There was mold, scrap metal, and rats. (CHW, Sao Paulo)*

Another CHW explained:

> *I don't examine patients…but I go to their houses and see their daily lives. I see their homes, their resources, their families, their social support, I see the things that affect their health. The doctors and nurses don't see this. (CHW, Sao Paulo)*

CHWs are successful at gleaning information that community members are reticent to share with health professionals. They are able to asess a patient's financial situation, social support, and major stressors and bring that information to the health care providers.

<u>CHWs provide social support:</u>

Another key theme that emerged was the social aspect of the CHW role. Many individuals in the neighborhood recognize CHWs and stop them to chat. Many visits take much longer than the time needed for the required tasks since many community members enjoy the company of CHWs and serve them coffee. A CHW in Sao Paulo explained:

> *Sometimes I take two hours on a visit because it is an older person suffering from*

loneliness. They just need conversation and company. (CHW, Sao Paulo)

CHWs see providing social support as a crucial part of their job, since it can improve mental health and well-being. Most CHWs said they like their job because of this social contact and because they enjoy helping people.

Perceptions of Principal Obstacles CHWs Face in Their Work

The biggest challenges CHWs cited were: 1) lack of understanding by the community members of the CHW's work and of the value of preventative health; 2) exclusion from administrative decisions made at the BHU; 3) limited resources available to address health needs. Challenges that were mentioned in both locations but emphasized more in Bahia included lack of opportunities to learn and advance in the CHW role, as well as inadequate supplies and uniforms, which CHWs felt undermined their legitimacy in the community.

Community members do not value the work of CHWs

The following complaint by a CHW in Sao Paulo captures frustrations described by many of the interviewed CHWs:

We work very hard and we have very little recognition. Sometimes people think CHWs don't do anything, because they see us around the neighborhood and think we're just chatting. We advise on various issues, we tell them all sorts of information…but they want more.

All CHWs described the low status and lack of recognition of their work within the community.

It is perceived as an easy job, since CHWs are often seen around the neighborhood during traditional work hours. CHWs mainly provide information and health monitoring, rather than services that community members traditionaly associate with care, such as vaccines and prescriptions. Healthy community members often don't see the need for regular CHW visits, and even some chronically ill individuals express similar ambivalence towards the CHWs, because CHWs dispense advice, support, and information rather than treatment.

Most CHWs in the study expressed difficulty with community members misunderstanding or overlooking the work of CHWs. In Bahia, their informal uniform, insufficient equipment, and minimal training compounded this challenge. The following quotes from CHWs in Bahia are representative of their concerns:

> *CHWs can't take blood pressure. We're just there to give information about the clinic. I think this is unwise...because then we as CHWs don't grow. There isn't a lot of room for growing, as a CHW. We barely receive any training. (CHW, Bahia)*

> *We have been asking for better uniforms for years. We ask about infant growth at home visits but don't have a scale to weigh babies. How will community members take our health advice seriously? (CHW, Bahia)*

In Bahia, CHWs felt that their work was overlooked by the community members they serve at least in part because they do not have uniforms or equipment that indicates they are professionals. In Sao Paulo, where CHWs wear uniforms and the BHUs have more equipment, CHWs still feel

that they are overlooked in the community, often due to community members' confusion about the CHW role.

Poor understanding of preventative medicine:

Many CHWs described that a major hurdle in their work was convincing community members to take preventative health measures.

> *I have one woman on my area who never wants to get a pap smear. I always tell her to get it, and I explain why, but she doesn't see the point. She says, "I'm fine. I'm not sick. Why would I go get an exam?" They don't see the point of our work so they don't value it much. (CHW, Sao Paulo)*
>
> *You don't see a lot of interest in prevention…for a child's check-up, for example. There is this idea that if im not sick, I can miss the appointment. (CHW, Sao Paulo),*

CHWs encourage people to sign up for health screenings, only to see them miss the appointments because they feel healthy. Community members in general don't understand or value the prevention of disease, making it hard for CHWs to get people to invest in their health through preventative actions. In contrast, sick community members who have an immediate need for the BHU do value the CHWs:

> *Researcher: Who values the CHW work?*
>
> *CHW (Sao Paulo): The patients who really need us; they value it. The sick patients, the hypertensive people, the diabetics, the bedridden patients. Those who see the immediate value of our work appreciate us.*

Lack of communication between CHWs and BHU

In the larger BHUs, 5-8 different primary care teams operate out of the same clinic. When changes are made to the BHU protocols or clinic schedules and CHWs don't know the most up-to-date information, it can hurt their credibility in the community. A CHW in Sao Paulo explained:

> *We can't give [community members] the wrong information about what time the health center opens because if it's wrong then they will have a hard time believing us the next time. When we say, 'it is time to get your vaccines,' they'll say, 'but you were wrong last time.'*

Another CHW in Sao Paulo explained how frustrating it is for community members to receive different information from CHWs and the BHU:

> *What wears down the patient the most is hearing conflicting information. Sometimes we make the patient dance! It is a dance they have to do when they get to the BHU. Go here, now go there, now go here, now go there. Now go up the stairs, now do a flip…we make them dance just to answer their question. It's not fair.... Especially when we do our job, but no one is taking it forward from there. We pass the soccer ball to the front, but then it gets stuck.*

CHWs spend a long time establishing their credibility in the community, which can be undermined when they are not abreast of the most current information or when BHU staff dispense conflicting information. CHWs in Bahia did not face this challenge to the same degree,

likely because they worked in smaller BHUs with fewer teams, so there were fewer logistics and schedules to manage.

Limited healthcare resources

Many CHWs in Bahia and Sao Paulo felt that a major obstacle to their work was limited resources available. The CHWs' role is to connect community members to healthcare services, but the services are not always accessible:

> *My biggest obstacle is not being able to help someone. Sometimes things they need are out of my reach. For example, an exam or test that has a month-long waiting list, or a long wait to see specialist. I can't help with these problems. (CHW, Sao Paulo)*

> *You work hard to convince a patient that they need to go to the BHU. They finally go and then the BHU doesn't have the personnel, the materials, or the medications. For example, you convince them to see a physical therapist and then the center doesn't have the space for exercises. (CHW, Sao Paulo)*

The CHWs expressed frustration due to not being able to connect community members with the services they need.

Recommendations for Improvements To Improve CHWs' Ability to Fulfill Their Roles

Many of the CHWs' ideas for improving their effectiveness are related to the main challenges they face in everyday work. CHWs recognized that the obstacles of working in dangerous

neighborhoods and a fluctuating population were beyond the scope of the health system. They suggested investments in infrastructure, including more health care providers and streamlined IT systems, and improved communication between CHWs and clinic staff.

Inclusion of CHWs in clinic administration

In some of the BHUs, CHWs are not included in decision-making or administrative meetings. This means that CHW perspectives and insights do not shape clinic operations, as one CHW described:

> *We don't participate in BHU decision-making. If we are really so integral to the BHU and such an important part of the team, shouldn't we be at these meetings, putting in our input, participating in the decisions being made about the BHU and the care at the center? We have a different point of view, so we should be informed and included in these decisions. (CHW, Sao Paulo)*

Increased communication between the CHWs and the BHU staff would also help ensure that CHWs are able to present accurate and up-to-date information, so that community members do not get conflicting information at the BHU that erodes their trust in the CHWs. CHWs in Sao Paulo had daily meetings at the clinic, but thought that they could be more effective if they were communicating more with the clinic staff:

> *We need more joint planning, planning together. We need to plan along with the BHU personnel… We all need to speak the same language, and all give out the same information. (CHW, Sao Paulo)*

Community education about the role of CHWs and importance of preventative health

Many CHWs mentioned the difficulty of misperceptions about preventative health within the communities they serve. Since the BHU is perceived as a place to go to receive treatment, CHWs are challenged to convince healthy community members to seek health maintenance appointments. A CHW in Sao Paulo explained:

> *Part of it is the culture, the same culture I grew up with. I learned that you only go to the doctor if you are sick. We don't grow up with this notion of going to the doctor if you're healthy. This is what I learned from my parents, and it is what [my patients] learn too. We don't understand prevention very well. We think the doctor is a place we go to get treated.*

Part of the lack of appreciation for CHWs stems from lack of understanding or valuing of preventative health. Even if CHWs are completing their official duties, they quickly lose reliability and authority within the community when they cannot meet the community members' expectations of receiving vaccines or medications from health care professionals. Many healthy community members have difficulty appreciating preventative health measures and the importance of information-gathering in improving the health of the community, and, thus, difficulty appreciating the role of CHWs. Community education about the role of CHWs in preventing disease is important for signaling to the community the value of CHWs, in addition to creating accurate expectations for the services CHWs will provide.

Expanded training and professional support for CHWs

CHWs in Bahia and Sao Paulo felt that they could be more effective in their role as CHWs if the role was professionalized through a certification program.

> *If you arrive at a house and say I'm trained and certified in community health, then people respect you more. (CHW, Bahia)*
>
> *We need more guidance in how to clarify patients doubts about health whether they need to see a doctor. (CHW, Sao Paulo)*
>
> *A lot of us only come in with [a middle school education] and we don't have education about medicine or public health. The problems we deal with are personal; we need training on how to approach sensitive topics and the basics of preventative care. If we have a CHW certification, our patients will trust us more and be more likely to go to the BHU (CHW, Sao Paulo).*

Discussion

In this study, CHWs see themselves as conduits of information between the community and the health center. They are data collectors, myth-busters, and interpreters. One key finding is that CHWs address the social determinants of health in a way that is distinct from other health professionals in the FHS. They assess food security, domestic violece, and safe housing. Unlike health workers based at the clinic, CHWs view the health of the community in the context of home and community life. Additionally, CHWs have the time and familiarity with the community to provide social support to isolated community members.

Despite these unique strengths that CHWs bring to the health system, CHWs face several challenges in reaching their full potential. Many of the obstacles CHWs face stem from a lack of understanding about the CHW role and activities within a preventative primary health system. Similar to findings by Druetz et al (2015),[34] CHWs can feel invisible both in the community and at the clinic: community members don't value advice as much as they value formal medical treatment, and CHWs are not included as team members in clinic decisions. Several other studies of CHWs have found that the limited tasks assigned to CHWs play a significant role in their overlooked status in the community.[32,40,41]

CWHs spend their energy building trust and convincing community members of the value of going to the UBS for healthcare. However, when community members arrive at the UBS, they may face conflicting information about schedules, not enough health personnel, or find out that the service they need has a long waiting list at the regional hospital. CHWs feel that their job of connecting the population to health services is only as useful as the accessibility of services.

Surprisingly, there were few differences in the experiences between CHWs in Bahia and São Paulo despite an 8-year gap in data collection, suggesting that the role and challenges of CHWs have been relatively stable. Some challenges reflected the local population; traditional medicine is more popular in Bahia than São Paulo.

The CHWs' familiarity with the community and informality of their role help them build trust and relationships. Yet the informality of the role also contributes to their being less

esteemed within the health system and community, which potentially diminishes their impact. While formal certification may create a sense of social distance between CHWs and community members,[42] our results indicate it is more likely to increase confidence in CHWs than harm the relationships between CHWs and community members, and also provide the CHW with means to help addressing the other primary care attributes (comprehensiveness, coordination, continuity and accountability).[43] Future research should address how best to achieve this balance between thorough training for CHWs and maintaining their rapport with the community.

With expanded training for CHWs, one of the challenges will be to retain the prevention and surveillance functions of CHWs even as they gain more clinical skills. In an evaluation of CHWs programs in three developing countries, Gilson et. al. note "CHWs have less credibility in the community if they do not have curative skills, yet if they have them, the tendency is always to give preference to treatment rather than to routine preventive activities." A combination of community education about the CHW role in preventive health in addition to providing CHWs with more technical knowledge will likely improve the community's acceptance and use of CHWs.[44]

There are several limitations to this study. These include the sampling methodology. We recruited CHWs from as many different UBSs and teams as possible to elicit a wide variety of experiences; however we did not speak to a random sample of CHWs. In addition, some bias is due to conducting the study at 7 of the thousands of UBSs in Brazil. We compared data between two different regions and time periods, but our results are dependent on the characteristics of

these communities. Brazil is a diverse country and CHWs working in other regions may have different experiences.

Conclusion

This study identified the key roles that CHWs play in the Brazilian Family Health Strategy and key obstacles to their work, from the perspective of CHWs. CHWs are uniquely poised to improve community health due to their relationship within the community, outside the realm of the clinic and institutions. Understanding the CHW role in Brazil helps inform best practices for recruiting, training, and supporting community health workers to improve health. Our results suggest that a comprehensive certification program for CHWs recruited from within the community, in addition to on-going training and support, will lead to more competent, respected, and effectively utilized CHWs.

Acknowledgements

The project described was supported by Grant Number P30DK092926 (MCDTR) from the National Institute of Diabetes and Digestive and Kidney Diseases.

Conflict of Interest Disclosure

The authors have no conflicts of interest to disclosure

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Table 1. Characteristics of CHWs

	Bahia	São Paulo
Average age: mean (range)	33 (23-45)	41 (26-67)
Average time as a CHW (years)	4 (1-12)	6 (<1 – 14)
% female	50	91