Community health workers in health systems strengthening: a qualitative evaluation from rural Haiti

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Background: Haiti is among the countries facing serious shortages in human resources for healthcare. In rural Haiti, the need for daily, long-term adherence to medication for HIV and TB was initially the driving factor for recruitment of community health workers (CHW) during scale-up of HIV services. Their role became broader over time. This qualitative study evaluated the role of CHW in the health system as a whole in both HIV and non-HIV-related services in rural Haiti and investigated the challenges and facilitating factors for their work.

Methods: We used qualitative methods including focus group discussions and group interviews in four sites in rural Haiti. Data from 462 CHW were analysed for themes and content according to standard ethnographic methods.

Results: CHW contributed to a wide range of primary health services and non-HIV-related activities. Recognition from the community, status, satisfaction of contributing to the well-being of others and remuneration were facilitating factors to performing their work. Challenges included insufficient materials to cope with the obstacles on the ground, lack of diagnostic and treatment roles in their activities, high work load, and desire for ongoing training and a higher salary.

Conclusion: CHW initially hired for HIV care represent an important part of the health system in rural Haiti in both HIV-related and primary healthcare services. CHW programmes have important potential for building capacity in the health workforce and thereby contributing to strengthening of the health system as a whole. Attention must be paid to adequate remuneration, training and provision of materials.

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'Our work brings the joy of life to our communities'
A community health worker in rural Haiti

Introduction

Thirty years after the Declaration of Alma Alta, 500 million people still do not have access to adequate primary health care worldwide [1]. The severe healthcare worker shortage in many parts of the world is one of the barriers that needs to be addressed to improve primary health services [2,3]. Increased attention has recently been paid to the importance of health systems in achieving the health-related millennium development goals [4–6]. This problem has been cast in sharpest relief as countries attempt to implement treatment programmes for HIV, tuberculosis and malaria, and applicants for the large-scale global health initiative funds, such as the Global Fund to fight AIDS, TB and Malaria (GFATM) and the U.S. President's Emergency Plan for AIDS Relief (PEPFAR),

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are encouraged to include efforts to strengthen health systems as a component of their applications [7].

Haiti is one of the developing countries seriously affected by the global professional health worker shortage, with just 2.5 doctors and 1.1 nurses per 10 000 inhabitants [8]. The great majority of those doctors and nurses practise in the capital city or in other urban areas resulting in an uneven distribution within the country that has a negative impact particularly in rural areas. Traditional healers, vodou priests and traditional birth attendants are often the only 'healthcare providers' to whom the population has access. With a lack of trained health workers and less than US$2.9 per capita in health expenditures in 2004 [9], it is not surprising that Haiti has some of the worst health indicators in the western hemisphere [10]. One strategy to deliver disease-specific care in the face of the healthcare worker crisis that has been adopted in Haiti is the utilization of community health workers (CHW) to assist in the long-term adherence and follow-up of patients with HIV and tuberculosis. Given the massive expansion of health services needed to achieve both universal access to HIV treatment as well as the millennium goals, it is critical to consider how this cadre of workers can contribute to the strengthening of the health services overall in addition to their disease-specific role.

For 25 years in rural Haiti the non-profit organization Partners In Health (PIH), in collaboration with the Haitian Ministry of Health, has implemented a comprehensive community-based healthcare programme using CHW; some have been disease-focused –'accompagnateurs' for HIV and tuberculosis patients, others are more general health workers – 'agents de santé', who provide basic support including growth monitoring, oral rehydration solution, breastfeeding support and immunizations. Before global health initiative funding this model was associated with a charity hospital in a community (Cange, Haiti) of approximately 10 000 people. Over the past 5 years funding from global health initiatives, GFATM and PEPFAR, has allowed PIH to collaborate with the Haitian Ministry of Health to expand this model in two states in Haiti serving a population of approximately one million people [11,12]. We conducted a study to evaluate the role of CHW in the PIH model of care in Haiti specifically to assess how community-based workers interacted with the health system in both HIV-related and non-HIV services, and to assess the challenges, barriers and facilitating factors for their work.

Participants and methods

We used qualitative methods to study the role of CHW in a model of scale-up of HIV care in central Haiti. In March 2007 we conducted a series of group interviews and focus group discussions at four PIH sites in the Central Plateau of Haiti.

Sampling and size

Interview sites were chosen to represent both the highly rural and small village settings common for PIH health centres. CHW subjects were recruited via advertisement at a monthly staff meeting, and all CHW at the sites were invited to participate including those from different CHW cadres (see Table 1). The two main categories of CHW are accompagnateurs and health agents (agents de santé). Accompagnateurs have basic literacy skills and receive at least 3 days of basic training and continuing education when hired. Their defined role is to participate in the daily care of patients with chronic diseases such as HIV and tuberculosis by bringing medications to them every day, assessing their progress on treatment, identifying side effects of therapy and referring them to the health centres when necessary. They also participate in health education and active case finding for HIV, tuberculosis and sexually transmitted infections. The health agent position existed in Haiti before the PIH programme. They have completed at least primary school as baseline and receive a minimum of 6 months of training. In addition to HIV and tuberculosis-related activities, health agents also routinely provide preventative care such as immunizations and family planning, the distribution of oral rehydration solution and condoms and disease surveillance. A third cadre is the community health educator, typically a secondary-school graduate with 2 weeks of initial training and monthly continuing education.

Data collection

Data were gathered from a total of 462 CHW. Fifty-one CHW were divided into five groups of approximately 10 individuals, with equal representation from each of the three cadres. A series of 19 group interviews was

Table 1. Demographics of community health worker cadres.

	Accompagnateurs	Health agents	Health educators
Number	1439	125	45
Ratio male : female	3/1	4/1	4/1
Training	Ability to read and write. 3 Days of training + ongoing monthly training	Primary school. 6 Months of training + ongoing monthly training	Secondary school. 3 Months of training + periodic training
Monthly salaries	US$60	US$100	US$300

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conducted; 13 groups of approximately 27 accompagnateurs each, three groups of seven health agents and three groups of five health educators. The 462 CHW interviewed represent approximately half of the total CHW employed in the districts selected. Interviews were conducted by one of three native Haitian Creole speaking researchers in person, tape recorded and transcribed. The interviewer asked CHW a series of open-ended questions inviting them to discuss their roles in both HIV and tuberculosis-related health care as well as their interactions with the health system as a whole. They were asked to describe the challenges and the facilitating factors for their work.

Research ethics

This study was approved by the committee on ethics and research of PIH/Zanmi Lasante in Haiti. Data collected from the focus group discussions and interviews were kept anonymous.

Data analysis

The goal of the open-ended questions posed during group interviews and focus groups was to search for variability and richness in assessing the work that CHW perform rather than for statistical representation. Analysis was performed by looking for theme and content according to standard qualitative methods [13,14]. This process included open coding to identify central concepts and categories and axial coding to relate these categories to sub-subcategories [15]. The trustworthiness of our findings was enhanced by two investigators coding the raw data to ensure the authenticity of the coding scheme; the final coding scheme was developed by consensus and used for the analysis. The interpretation of findings was triangulated with quantitative data on patient care visits obtained from the 2007/2008 annual PIH report.

Results

We identified four interrelated domains related to the role of CHW in the health system: time spent on health-related work; participation in activities beyond those that were assigned; perceptions of role; and challenges.

Time spent on health-related work

The CHW interviewed are remunerated as part-time workers. Based on a full-time 40-h work week, they reported on average spending 63% of their work week on health-related activities and the remainder on household duties, farming or small commerce. This percentage varied between cadres of CHW; 55% for accompagnateurs, 60% for health agents and 75% for community health educators (community health educators spent additional time on institutional activities in addition to community work). All cadres were regularly solicited by people in their community to provide services such as referrals to the health centre, advice about both health and non-health-related issues, and were frequently consulted before community members went for primary healthcare visits at the clinics. Within the previous month, on average each accompagnateur reported having been solicited 25 times, each health agent five times and each health educator 10 times by community members other than their assigned patients. One CHW said:

'. . .they involve us in all aspects of their lives.'

These findings highlight the fact that in addition to the HIV and tuberculosis disease-specific activities to which they are assigned, CHW are viewed by their community as an important link in the health system.

Activities beyond those that were assigned

In the spirit of solidarity and compassion CHW often voluntarily provided services beyond those requested of them by their employer. They often provided intermittent economic support from their own resources for their patients' unmet needs; they accompanied patients with special needs to general medical appointments; they assisted patients with permanent or temporary disabilities in domestic tasks such as cooking, laundry, house cleaning or bathing. Furthermore, CHW stated that, in addition to the tasks they currently performed, their scope of practice could be widened to allow them to conduct more activities in their community if certain obstacles were overcome. The willingness to extend their activities varied depending on their CHW category. Accompagnateurs reported that they would like to take on some of the roles assigned to health agents. Both accompagnateurs and health agents said that they would like to be trained to perform certain traditionally clinic-based tasks such as HIV testing and formal counselling, the collection of sputum specimens for tuberculosis suspects or patients, malaria treatment, wound care/first aid and basic monitoring and management of patients with diabetes and high blood pressure. This suggests that CHW constitute a human resource pool that can be used to improve access to care and services despite the shortage of higher level healthcare professionals.

Perception of role

CHW perceived that they play an important role in their community. They particularly valued the fact that they are having a positive impact on health outcomes – outcomes that they themselves observed. They reported that their work has positively influenced health beliefs in their community; fewer people use vodou priests to look for supernatural causes of their children's illnesses; more women have adopted exclusive breastfeeding as an important strategy for infant health. One health agent said:

'Before our presence in the community (1984) many people, especially children, used to die from diseases such as measles, whooping cough, malnutrition and diarrhea. If

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health agents were to disappear the same phenomenon would reappear in the communities.'

Health educators said that their work makes them 'a bridge' between the patients and the clinical staff. One said that their work:

'. . .changes the perception of HIV/AIDS, reduces stigma/ discrimination, and contributes to decrease the transmission rate.'

CHW experienced prestige in their community as a result of the work that they do; one accompagnateur said: 'they call us doctors', a term considered by the CHW as one of respect. CHW as a group believed that their recognition and standing in the community would be greater if they were involved in more diagnostic and therapeutic activities such as HIV testing, the collection of sputum specimens from tuberculosis patients, malaria treatment, as well as a basic level of management of high blood pressure and diabetes.

Challenges

The obstacles and barriers faced by CHW to performing their job satisfactorily varied according to their cadres. Some challenges included lack or shortage of materials/ supplies (sterile gloves, oral rehydration salt packets, condoms, sterile gauze, syringes, needles); lack of equipment necessary to cope with special weather conditions during the rainy and hot seasons (boots, umbrella, raincoat, waterproof bags, plastic folder, cooler); lack of adequate transportation for hard-to-access areas. Administrative barriers included occasional late payment of salary, lack of performance-driven rewards and the need for identification badges. The slow response of the health sector in providing financial assistance to patients was viewed as a challenge.

Other obstacles were related to the workload itself. Some CHW stated that an ideal patient-to-CHW ratio should be four to one, although some of them had more than twice this ratio. They estimated that the ideal walking time from their house to the patients assigned to them should be 2 h for a round trip; however, some of them walked almost twice this time to reach their patients. Some believed that at times there was a lack of recognition of their work by the clinic-based personnel, especially if certain referrals were not considered appropriate. They emphasized a timely, adequate salary as an important incentive to perform their job better and that an increase in their salary would allow them to dedicate more time to their patients and to increase their scope of work. Among CHW, only community health educators did not mention salary as an obstacle in their job performance.

These findings highlight the importance to CHW of adequate remuneration and the appropriate availability of materials and tools to perform their jobs.

Discussion/recommendations

Since the declaration of Alma Ata, CHW have been recognized [16]. Although their specific role is diverse, according to a World Health Organization (WHO) study group, CHW are members of a given community who are accountable to the community that they serve, have limited training compared with health professionals, and receive support from the healthcare system without necessarily being fully integrated into its organization [17]. Their involvement became more extensive in efforts to eradicate and control chronic diseases such as tuberculosis, malaria, HIV/AIDS, and more recently diabetes and high blood pressure [18,19].

Lack of human resources for health has been recognized as one of the bottlenecks towards the achievement of both the millennium development goals and 'universal access to HIV prevention, care and support' by 2010. In response to this gap, the WHO launched in 2006 the 'Treat, Train, Retain' initiative, which aims at strengthening and expanding the health workforce. Task-shifting is a key element of the 'Train' component of this plan, and is intended to be an urgent response to the healthcare worker crisis, especially in the context of the HIV/AIDS epidemic. Recognition is given to the ability, with appropriate training, remuneration and supervision, of CHW to provide a range of services traditionally performed either by higher level cadres such as nurses or not provided at all by clinic-based teams [20].

Long before this initiative, expanding on the directly observed therapy strategy used for tuberculosis treatment, PIH developed a model using CHW to accompany patients with diseases such as tuberculosis and HIV throughout their treatment. In this context, HIV seroprevalence in prenatal clinics declined from 5% to 2.7% over 5 years, and the treatment dropout rate over the same period was 2% [21]. In addition to these targeted disease-specific benefits, this study demonstrates that CHW hired initially for HIV activities identify and take pride in their contributions to a much wider role in healthcare delivery in their community. Furthermore, by expanding the services they provide to fill gaps that they saw at a community level, CHW at PIH demonstrate their personal investment in the improvement of the well-being of their entire community and their own potential in forming even more extensive networks of support in areas that are otherwise underserved both by human resources for health and by primary health services. This is further supported by previous data that CHW in this programme increased the utilization of primary healthcare services and aided in access to care for the most vulnerable [12].

The ability to provide curative care, adequate remuneration, training and supervision are essential components of building strong CHW programmes as well as

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confidence among community members that motivate them to use the services that CHW provide [15,22]. PIH has always paid CHW [12], yet despite this, remuneration was frequently cited as a challenge for workers interviewed – this was even more apparent as the economic crisis of 2008 caused increased costs of living, further hitting the rural poor from whose ranks most PIH CHW are drawn.

PIH currently employs a total of 1439 accompagnateurs, 125 health agents, 45 health educators and 88 women health agents, who together serve over 4000 patients receiving treatment for tuberculosis and 12 000 people with HIV. Expansion of this CHW programme occurred largely as a result of funds from GFATM and PEPFAR (in addition to private donors) for the expansion of HIV-related activities. In concert with the expansion of HIV-focused services, the development of primary healthcare services was considered essential [12]. A deliberate initial strategy to integrate CHW not as single disease-focused healthcare workers, but as a network that acted as a bridge to clinic-based primary healthcare services, resulted in the organic development of a core building block of the local health system. This is further reinforced by the fact that more than 1.9 million patient visits were recorded by PIH staff in this area of Haiti in 2007. In this study, not only do accompagnateurs confirm their participation in non-HIV/tuberculosis-related activities, but they overwhelmingly stated that their real capacity to provide health services in their community is underutilized. With further training they were willing to take on more sophisticated tasks particularly in the diagnosis and treatment of certain diseases. Although formal cost-analysis has not been performed, CHW salaries comprised approximately 5.8% of the annual PIH budget for activities in Haiti in 2008.

Health system strengthening has been defined as building capacity in critical components of health systems to achieve more equitable and sustained improvements across health services and health outcomes [23]. The health workforce is seen as one of six essential building blocks for the health system, and a well-performing one has been described as one that is responsive, fairly distributed and efficient, including competence and productivity [24]. The CHW in this programme were hired initially for the expansion of HIV-related services as a result of funding from major HIV-related global health initiatives. By using the funding to form a 'diagonal' expansion of the health workforce at a community level, the PIH/Ministry of Health programme succeeded in developing capacity in this critical component of the system. Furthermore, by providing services to the rural poor, the programme succeeded in improving equity of distribution of the workforce as well as improved equity in the distribution of access to primary health services.

Conclusion

There is an urgent need to bring comprehensive health care to the half a billion people who do not have access to adequate primary health care worldwide. The human resource crisis must be addressed immediately if the three health-related millennium development goals are to be achieved by 2015. This study shows that in the context of a comprehensive strategy to improve primary health care and to address challenges of remuneration, materials and workload, CHW hired for disease-specific initiatives represent a potentially powerful component of the solution to this human resources crisis. They offer an important means by which to strengthen health systems for the delivery of care, prevention and education, particularly in rural isolated settings and particularly by providing services that would not otherwise be delivered even if other healthcare professionals were available.

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References

1. Conille G, Lutz B, Negin J. *Building national systems of health outreach agents to achieve the Millennium Development Goals in Africa: an operational agenda for national and international stakeholders*. Addressing the Urgent Human Resource Constraint for Health in Africa: Scaling up Community Health Worker Programs (conference). Nairobi, Kenya: May 2007.
2. Kober K, Van Damme W. **Scaling up access to antiretroviral treatment in southern Africa: who will do the job?** *Lancet* 2004; **364**:103–107.
3. Samb B, Celletti F, Holloway J, Van Damme W, De Cock KM, Dybul M. **Rapid expansion of the health workforce in response to the HIV epidemic.** *N Engl J Med* 2007; **357**:2510–2514.

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4. World Health Organization. *Fully functioning and equitable health systems: a prerequisite for reaching the health MDGs*. MDG: Health and the Millennium Development Goals. Geneva: WHO; 2005.
5. Travis P, Bennett S, Haines A, Pang T, Bhutta Z, Hyder AA, *et al*. **Overcoming health-systems constraints to achieve the Millennium Development Goals.** *Lancet* 2004; **364 (9437)**:900–906.
6. Cavagnero E, Daelmans B, Gupta N, Scherpbier R, Shankar A. **Assessment of the health system and policy environment as a critical complement to tracking intervention coverage for maternal, newborn, and child health.** *Lancet* 2008; **371**:1284–1293.
7. Evans T, Nishtar S, Atun R, Etienne C. **Scaling up research and learning for health systems: time to act.** *Lancet* 2008; **372**: 1529–1531.
8. Pan American Health Organization. *Health human resources trends in the Americas: evidence for action*. Geneva: World Health Organization; 2006.
9. United Nations Development Programme. *2007/2008 Human development report*. Geneva: UNDP; 2008.
10. Pan American Health Organization (PAHO). *Basic health indicator database: Haiti*. 2000. Available at: http://www.paho.org/English/SHA/coredata/tabulator/newTabulator.htm. Accessed: 5 January 2009.
11. Farmer P, Leandre F, Mukherjee JS, Claude M, Nevil P, Smith-Fawazi MC, *et al*. **Community-based approaches to HIV treatment in resource-poor settings.** *Lancet* 2001; **358**:404–409.
12. Mukherjee JS, Eustache FE. **Community health workers as a cornerstone for integrating HIV and primary healthcare.** *AIDS Care* 2007; **19 (Suppl. 1)**:S73–S82.
13. Strauss A, Corbin J. *Basics of qualitative research: techniques and procedures for developing grounded theory*. Newbury Park, CA: Sage Publications; 1998.
14. Tashakkori A, Teddlie C, eds. *Handbook of mixed methods in social and behavioral research*. Thousand Oaks, CA: Sage Publications; 2003.
15. Daly J, Willis K, Small R, Green J, Welch N, Kealy M, Hughes E. **A hierarchy of evidence for assessing qualitative health research.** *J Clin Epidemiol* 2007; **60 (1)**:43–49.
16. World Health Organization. *Declaration of Alma-Ata, USSR*. Geneva: WHO; 1978.
17. World Health Organization. *Strengthening the performance of community health workers in primary health care: report of a WHO study group*. Geneva: WHO; 1989.
18. Rosenthal E, Wiggins N, Brownstein J, Rael R, Johnson S, Koch E. *The final report of the National Community Health Advisor Study*. Tucson: University of Arizona; 1998.
19. Johnston H. *Health for the nation's harvesters: a history of the migrant health program in its economic and social setting*. Farmington Hills, MI: National Migrant Worker Council; 1985
20. World Health Organization. *Task shifting to tackle health care workers shortages*. Geneva: WHO; 2007.
21. Behforouz HL, Farmer PE, Mukherjee JS. **From directly observed therapy to accompagnateurs: enhancing AIDS treatment outcomes in Haiti and in Boston.** *Clin Infect Dis* 2004; **38 (Suppl. 5)**:S429–S436.
22. Delacollette C, Van der Stuyft P, Molima K. **Using community health workers for malaria control: experience in Zaire.** *Bull WHO* 1996; **74**:423–430.
23. World Health Organization. *Making health systems work: opportunities for global health initiatives in the health system action agenda*. Geneva: WHO; 2006.
24. World Health Organization. *Strengthening health systems to improve health outcomes: WHO's framework for action*. Geneva: WHO; 2007.

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