

The role of Community Health Workers. Historical perspective of facilitators and barriers.

Case study in Vaupés, Colombia

María Camila Rodríguez van der Hammen

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Pablo Montoya Chica

Gabrielle O'Malley

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Maria Camila Rodríguez van der Hammen

University of Washington

Abstract

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María Camila Rodríguez van der Hammen

Chair of the Supervisory Committee:

Pablo Montoya MD, MPH

Department of Global Health

Abstract

Background: The use of community health workers (CHWs) has been identified as an important strategy to extend health care and improve the health of populations, particularly in low-income countries and rural areas.^{2,3} However, they are also a vulnerable group that face the consequences of all the complex political, economic and social factors that have shaped their role over the last 30 years. This study focuses on the role of CHW in Vaupés and on how their role has changed over time. It aims to understand the factors that have influenced their role over the last 30 years and how changes to their role have affected the CHWs' performance.

Methods: We conducted a qualitative exploratory study using focus group discussions and in depth interviews/life stories with CHWs and key informant interviews with health authorities at the local and national levels.

Results: Several global, national or external and local or contextual factors have affected the role of community health workers over time. The global factors include structural adjustment programs, and policies and international demand for drugs. The external/national factors include the 1993 health care reform, narco-trafficking and the internal conflict. The contextual/local factors include the geographical barriers and indigenous context.

Conclusions: The CHWs' role in Vaupés, Colombia has been changed dramatically the past couple of decades, negatively affecting the health outcomes for many marginalized communities. The results highlight the key position CHW can have, bridging two medical systems and contributing to the improvement of health outcomes of isolated communities. In the post conflict scenario, the figure of the CHW can be important for peace building and conservation inside the communities, and help in the process of recovering communities' trust in the State.

Introduction

The 1978 Alma Ata declaration on *Primary Health Care* stated the importance of preventive medicine to impact community and environmental determinants of health. It also suggested that traditional medicine could be key to controlling diseases in certain areas of the world. To reach these goals, the strategy promoted social participation and training of community members, who could connect the health system with the community¹. Since then, the use of community health workers (CHWs) has been identified as an important strategy to extend health care and improve the health of populations, particularly in low and middle-income countries and rural areas.^{2,3} CHWs have had especially important roles improving childhood nutrition and reducing under 5 mortality.^{3,4,5} In certain settings, they are the only option community members have to access health care services.

“Community Health Worker” encompasses a diverse group of health workers generally defined as: “any health worker carrying out functions related to health care delivery; trained in some way in the context of the intervention, and having no formal professional or degree in tertiary education.”⁶ Commonly they work in communities outside of established health facilities, are members of the communities where they work, and selected by the communities.⁷ Different places in the world have different denominations for the CHW, like *promotoras/es* in many Latin American countries,⁸ natural helpers, *doulas*, lay health workers, and frontline workers, among others.⁹ Each name is unique to the context and the activities they perform, the training, remuneration strategies, tasks, support mechanisms, and career opportunities vary across countries². They work in both public and private sectors.⁴

In Colombia, various projects included training of community members following the recommendations of the Alma Ata declaration, for example, the *Promotoras Rurales de Salud* in Santo Domingo, Antioquia,¹⁰ and the Primary Health Care project developed in Vaupés.¹¹ Initially health promoters/CHW had broad healthcare delivery functions within the system including health promotion/education, household visits, epidemiologic surveillance, immunization, maternal and child health (MCH), administration of essential medications, among others.¹² Vaupés' CHWs had two different levels of training. The *Promotores* had one year of formal training but not a technical degree, and the nurse assistants (*Auxiliares de enfermería*) had 2 years of formal training and a technical degree. The later were the *promotores*' supervisors. Besides the supervision and few administrative functions, both performed similar activities.

The 1993 Colombian healthcare reform –which created an insurance-based system of regulated competition– lead to the fragmentation of health services, health promotion and prevention, clinical services and public health in general. The responsibility for the implementation of these activities was diluted across stakeholders (insurance companies, health authorities and local hospitals)¹³ whereas before it was clearly the responsibility of the State. The CHWs' role became unclear and their functions changed according to who hired them. In addition, with the enactment of the Human Resources for Health Law in 2007 (Ley 1164)¹⁴ the existence of the health *promotor* figure disappeared. Many CHWs were not qualified as nurse assistants and hence, excluded from the health system.

Since 2011, the Colombian government, through Law 1438, has sought to enhance the health system through implementation of a new Primary Health Care (PHC) strategy, which promotes the coordinated actions of the State and the society as a whole for the improvement of population health.¹⁵ Despite the government's efforts to regulate the health system and improve access to

health care, Colombia has huge disparities in health outcomes. The most vulnerable populations live in rural isolated areas, and add up to nearly a quarter of Colombia's population.¹⁶ Most rural inhabitants are ethnic minorities or farm workers, and many have suffered the consequences of the internal conflict that has affected the country for more than 60 years.^{17,18}

Vaupés province in the Amazon region is an example of a place where all these aspects converge. According to the 2005 census, the projected population of the province for 2015 was 44.079 inhabitants,¹⁹ most of whom live in isolated communities accessible only by boat or airplane. (See Figure 1.) Two-thirds recognize themselves as indigenous,¹⁹ and belong to 27 different ethnic groups. The population's health outcomes are poor. According to data available at the local health directorate, less than 20% of pregnant woman get four or more antenatal consultations and less than 60% at least one. Furthermore, 63% of the children under 5 years have some degree of malnutrition²⁰ and approximately 35% of kids between 6 months and 5 years have anemia.²¹ The maternal mortality rate in the province is 586 per 100.000, almost 8 times the national rate of 75.6 x 100.000.¹⁹ In this province CHWs could play a key role, but they are also a vulnerable group that face the consequences of all the complex political, economic and social factors that have shaped their role over the last 30 years.

This study focus on the role of CHW in Vaupés and on how their role has changed over time. It aims to understand the factors that have influenced the changes in their role over the last 30 years and how those changes have affected the CHWs' performance, from the perspectives of CHWs' and local and national Health authorities. By understanding how these factors have affected CHWs performance in the past we might better understand what is necessary for the reestablishment and future sustainability of these figures in the Colombian health system.

Figure 1: Map of Colombia and Vaupés province



Source: Google maps and Vaupes Health Directorate.

Methodology

We did an exploratory, descriptive study between August 2015 and March 2016. The study was conducted in the province of Vaupés (Colombian Amazon region) (See figure 1), and Bogotá (capital city). The study used focus group discussions (FGD) and in-depth interviews/life stories with the CHW's from Vaupés, and in depth interviews with health authorities (HA) from local and national levels.

We used purposeful criterion sampling to select the participants. The inclusion criteria for the HA were the position they hold in each institution. For the CHW's we looked for participants from different ages and ethnic groups. Participants did not receive any compensation for their participation in the study.

We developed an initial questionnaire in Spanish to which new questions were added after the first interviews were performed. The interviews and FGD used open-ended questions to explore facilitators and barriers to implementation of CHWs' role, how their role has changed over time

and perceptions of the reasons for these changes. We also explored the potential role CHWs could play in a community in the future.

After they were told about the purpose of the study and its limitations, all participants signed an informed consent prior to their interview. Interviews and FGD were conducted by the main researcher face to face, in Spanish, recorded in digital format (mp3) and then transcribed verbatim by a second person to Microsoft Word© documents. The texts were coded and managed using Atlas.ti© software, version 7. We used structural and thematic coding to analyze the data. We started with an “a priori” list of codes drawn from the literature review and the researchers’ (PM, AJB, MCR) prior experience. Afterwards we included additional themes that came up during the inductive analysis process. A second coder used the same start list and inductively coded for emerging themes. Coders discussed similarities and differences in the way codes were applied and agreed on the emerging ones. After the discussion, the codebook was updated.

The principal investigator (PI) and the second coder had lived more than 3 years in Vaupés and worked closely with CHWs, allowing them to have a broad knowledge of the context. The PI worked as a health provider, trainer, and coordinator of CHWs. Therefore, there could have been limitations regarding CHWs’ willingness to share their experience given the PI’s status and former position of power in the community.

This study was approved by the Institutional Review Board of the University of Washington in Seattle, Washington. It was funded by the Global Opportunities in Health Fellowship of the Department of Global Health from the University of Washington and Sinergias Alianzas Estratégicas para la Salud y el Desarrollo Social, a Colombian NGO.

Results

We conducted two FGDs and eight in-depth interviews/life stories with CHW, and nine key informant interviews with HA. CHWs' ages ranged from 28 to 62 years and participants belonged to seven different indigenous ethnic groups. Five were trained among the first cohort of community health care workers in the early 1980's, one in the mid 90's, and four in 2007-2008. Regarding the HA interviewed, we had participants from local and national levels (see Table 1).

Table 1: Overview Focus group discussions and interviews

Method	Number	Type of participant	Characteristics	Total participants
Focus group discussion	2	CHW	1 FGD with vaccination CHW (3 ethnic groups) 1 with general CHW (1 ethnic group).	6
In depth interviews	6	CHW	All with general CHW. 5 Different ethnic groups (Cubeo, Yuruti, Tuyuca, Tatuyo, Desano)	6
In depth interviews	5	Local health authorities	Representatives from the local hospital, health directorate and insurance companies.	5
In depth interviews	4	National health authorities	Representatives from the Pan American Health Organization and Ministry of Health	4
Total				19*

*Some participants from the FGD were also interviewed individually.

When the training of CHW in Vaupés started in the early 80's based on the principles stated by the Alma Ata conference, they had five basic functions: health service delivery, health education and promotion, epidemiological surveillance and leadership. During this time, they were conceived as an essential link between the communities and the health sector.¹¹ Over time, global, national and external and local contextual factors have affected the role of community health

workers. The global factors include structural adjustment programs and policies and the international demand for drugs. The external/national factors include the 1993 health care reform, narco-trafficking and the internal conflict. The contextual/local factors include the geographical barriers and indigenous context. Figure 2 presents a graphical representation of these influences.

External factors affecting the community health workers' role

A major change in the CHW role occurred with the 1993 health care reform which created a system based on competition and increased the participation of the private sector, in-line with structural adjustment policies.²² Health Authorities interviewed mentioned that after the health care reform, new laws around human resources for health were passed;¹⁴ the health promotor figure disappeared and a new job profile —the public health nurse assistant— was created. This new figure was slightly different from the promotor, given that it had less clinical duties and according to the HA interviewed, less leadership training. All the national level HA mentioned that the purpose of that law was to qualify the existing workforce. Nevertheless, all stated that the law was not implemented correctly because there was no local capacity to train all the promoters as public health nurse assistants, and the consequence was that most of the promoters were left out of the system.

Some participants stated that new laws —developed in the frame of the health care reform— increased the standards for service delivery in terms of professional profiles and infrastructure. Furthermore, national guidelines for managing diseases of public health interest do not even mention CHWs. All these factors modified the type of activities a CHW in an isolated rural community could perform and diminished their role. This situation is similar to that of other

countries like Guatemala, where the national health programs restructured the role of the midwife, limiting their practice to protect themselves from legal actions.²³

Another important factor affecting the CHWs' role was the reduction of resources. Funding for the original CHWs' training and incorporation programs came from international aid. CHWs engaged in the program early in its history remember always having more than enough supplies, gasoline for transportation and a steady job contract, as opposed to the current situation where the longest contract for a CHW is only for 6 months of the year and their supplies are scarce. Furthermore, during their training CHWs were provided with housing and food, a situation that no longer existed for those trained since the 2000's.

“As we say, we were in a time of fat cows. They brought us, we stayed there in the hospital houses in the Promotores area, and they gave us food three times per day. They changed the sheets for us and everything. And they gave each of us a stipend of 6000 pesos, which was a lot for that time.” (CHW_2)

The HA also mentioned how with those resources it was possible to perform a large amount of activities in all the communities of the area.

“The costs were high, yes. There was a routine of permanent flights to bring supplies, bring equipment, pick up patients, return patients, bring CHWs for continuous training, and bring community leaders to join the processes. We moved without restriction of resources, because what was important here, was that [the system] worked, and that the community actually felt satisfied with the sector and with the health processes they were being given. We accomplished that for some time. People remember that very well.” (HA_7)

The literature suggests that dependence on foreign donor support is a barrier to scaling-up and sustainability of CHW programs because the flow of those resources is irregular and drops over time,²⁴ and this has proven to be the case in Vaupés.

Participants also referred to health care reform having fragmented the services and described how that fragmentation affected their performance. Some community health workers stated the difficulties they face. Currently they have to go to the insurance company to get medications, to the hospital for the contract and they have to give the surveillance information to the province's health department.

“Now [we have] the mayor, the department and municipal [Health] Directorates, the governor, the insurance companies, and all that stuff; you have to go from here to there, and then there is a delay in all the procedures – then it is complicated, right?” (CHW_7)

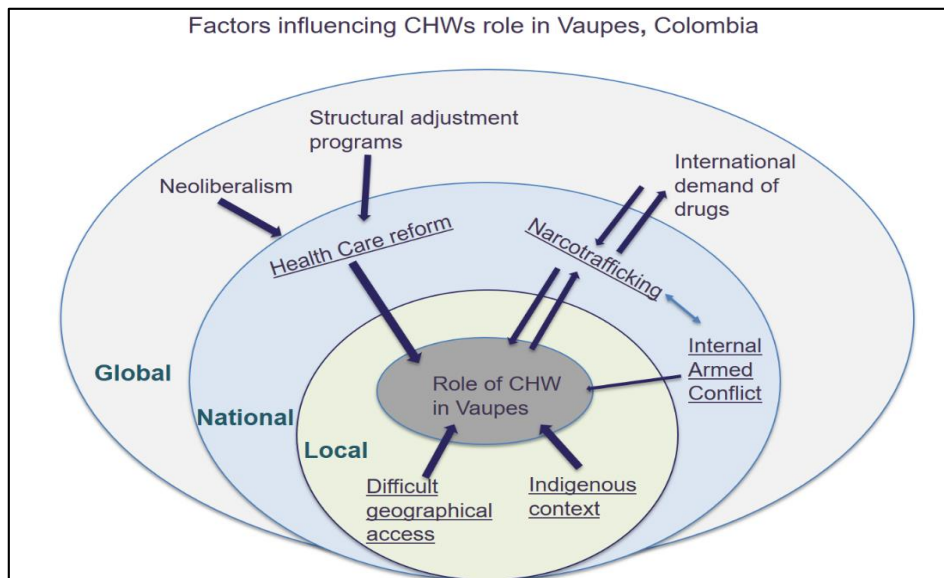
The HA also describe how the fragmentation of the system made it hard to continue with the model that was operating before.

“Because of the decentralization of health [processes], they said ‘Hospital, you assume the provision of health care services; insurance companies, you assume the insurance process; health directorates, you assume all the inspection, monitoring, and control; and each of you have your own competencies and functions.’ The resources also became more disaggregated, right? Some resources for the insurance companies; other resources for the municipal and departmental health directorates... Then we had more stakeholders in the system. Maybe the resources were the same, but they were disaggregated, and then it was very complicated to coordinate with everyone when the competencies for each

[stakeholder] were rigid, you know? Then we couldn't fund that same model anymore, and everything went to ruin, everything fell to the floor.” (HA_8)

Those changes in the CHWs role have modified the way they perform their job and hence, their relationship with the community.

Figure 2: Factors influencing the role of CHW in Vaupés, Colombia. 2016



Leadership role

Leadership was one of the functions affected by the changes brought by healthcare reform. Both HA and the CHWs, reported leadership as being one of the key functions for success in the CHW role. The leadership function gives the CHW convening capacity, it allows them to become mediators and to lead cross-cultural work because they have the understanding of both worlds.

Without training to help them develop their leadership skills, it is harder for the current CHWs to work as mediators between traditional knowledge and the western approach to health and disease.

It is also harder to perform the activities they are supposed to do like health education.

“No, the current guys have a really different approach. When they do the practical work, they don’t understand many things. They don’t understand, and [yet] they do their job, weighing, measuring height. They are great; it’s not that they don’t do what they have to do. They have the discipline for the routine work. But when you ask them to analyze or to interpret why something is happening, and that they look inside the community for alternative solutions to problems, these guys get overwhelmed, totally blocked” (HA_7)

This mediation role is really critically important for the implementation and acceptance of immunization and other programs. It becomes crucial when communities have to make decisions regarding their health. According to the interviewees, having a leadership position was one of the driving factors to become a CHW. This finding is supported by the literature, which has identified that a key intervention for CHWs is providing them with some constant form of nonmonetary motivation, usually in the form of social recognition.²⁴

“The community is always paying attention to the information, to what the promotor or nurse assistant does. The community always expects a CHW to be there with them, that person is a very important figure for the community, for the people, they respect them a lot because of their job, the management of patients, all those things, they were really important people.” (CHW_7)

Health promotion and education role

Both CHW and the HA recognize that health promotion and education are the main tasks of the CHWs. CHWs have been trained to work with community leaders, traditional healers and teachers to promote healthy behaviors and implement health prevention actions like vaccination.² These functions have not changed significantly since the 80’s. Nevertheless, tensions have risen between CHWs and communities’ expectations given the changes in other CHWs’ functions. The fact that

their clinical range of action was significantly reduced has become a barrier to convincing people to engage in some of the preventive activities.

“When you’re filing forms and there is no medication, you cannot go and talk to the people about prevention. Because in that moment you find patients, and that is when the people become angry. Because you can’t just go and go and go, and talk with people that are living in pain. So, what do you do with that illness? People need medications” (CHW_1)

Service delivery role

The first health promoters from Vaupés, were trained to provide key medical services. For example, all the interviewees from the first cohorts mentioned that they knew how to suture and how to use different medications. They even had basic training as dentists. Sometimes they had to do work as psychologists and do counseling, even if they were not trained for it.

This role of service delivery and primary care was key to having a good relationship with the community, and be recognized as leaders.

“When I would go to do household visits, a community leader always went along with me. We would bring medications, because not everybody went to the health post. So I also gave out a lot of deworming medications, and some painkillers. You would go to a household visit, and there at your visit you would ask the people, ‘How have you been? How has your health been? How long has it been since you’ve had deworming medication?’ Well, then you gave them medications and the people were happy with you” (CHW_6)

This function of health care delivery, especially regarding medication use, changed after the health care reform. Most of the CHWs complained about the changes in their relationship with communities.

“Now, people don’t respect you because you don’t do the same activities you used to do, especially regarding health care delivery. In that time, people saw a [large] quantity of medications arrive, they felt that there was something for them. Now, without anything, they look at you as any [other] member of the community” (CHW_7)

This situation has also been described in places like Brazil, where people in remote areas still place high priority on providing medicine and performing injections, because of the lack of formal medical health care in those areas.²⁵

Workload

All the different activities mentioned before, can surpass the capacity and time of the CHW. No consensus emerged in the FDG and interviews about the ideal amount and type of activities a CHW should do. For example, some thought it was better to have the vaccination programs separate from their role because those take too much time; others thought that a CHW should do everything in fewer communities. HAs also mentioned workload as being a barrier. When CHWs have to do a lot of activities in the community and at the same time the health system asks them to write reports, it results in a situation where the community complains that CHWs don’t do all the activities they used to do, and the HAs are unhappy because they don’t provide the expected information for reporting. This situation has also been described in other places like Ethiopia and Brazil where there were tensions given differing expectations from the community and health sector regarding

the role and responsibilities of CHWs, for example, concerning their role in childbirth or participation in politics.^{5,26}

Internal armed conflict and narco-trafficking

In Colombia, internal conflict and coca production have also shaped the role of CHWs. Some of the older CHW reported that after their training they went to work in coca plantations, because it was so much more profitable than being a CHW.

“I did my practicum year, right after finishing [the training]. In that time, we were in the peak of the coca bonanza, so I quit and I went to work in the coca [plantations] there in the upper [Vaupés river]. My colleague also quitted and we went there. [...] But we didn't do well there... And [the hospital] called us, they called us again. After a couple of years, I went back [to work as CHW]” (CHW_8)

Some CHW related that during the “coca bonanza” time in Vaupés, their relationship with the community was complicated given their position as outsiders witnessing the community's engagement in illegal activities. Furthermore, people from some communities had enough money to access medications from outside of the government health system. For example, they were even able to send a plane to pick up medicines from the capital city, and did not feel the need of a CHW.

The Colombian internal conflict also shaped the role of community health workers. There were some areas in Vaupés where there was an important presence of guerilla groups. Some of the community health workers had to leave the communities because the guerrilla threatened them. During this time, their ability to move to different communities was very limited.

“There was a nurse assistant that the guerrilla captured and we still don’t know what happened to him. He was my replacement in Mandi. He took over for me and I told him ‘My friend, be careful, because this area is very dangerous.’ I don’t know, but it seems that he was caught while he was informing that the guerrilla was there, because they had always the radio [communicator] on. Besides, he had a brother-in-law that was a police officer. So they took him and they captured him, and after that, no one wanted to go there.... Now it looks like [a CHW] is working [there]. The [CHW] didn’t come back until almost 10 years later.” (CHW_7)

Contextual/local factors that affect CHWs’ performance

Indigenous context

Globally, traditional medicinal knowledge and healing practices of indigenous peoples continue to be key for their health care and there is increased acceptance in the practice of integrating western and traditional indigenous medicine in health systems.²⁷ CHWs have a unique role in this context, becoming the link between medical systems.²⁶ However, this task also implies several challenges. One of those, mentioned by several interviewees, was the conflict with authority figures. One of the HA explains it very well.

“[The CHWs] were from the communities, but recruitment started to generate one of the first difficulties that existed in the communities with promotores. If they were hired by the hospital, then there were difficulties with who to take orders from —whether to answer to the traditional authority or to what the hospital said—. Therefore, some situations arose and, of course, because the hospital was paying them, most of the time they ended up taking more orders from the hospital manager than from the traditional authority. And that

generated conflicts, which in some cases got solved and in others, did not. That's how some situations started. During that time, no one had money in indigenous communities, right? So some social differences started to rise, not exactly social classes, but differences, because some had income and others didn't. Then it started to generate some dynamics at the interior of the communities that aren't easy.” (HA_1)

Those difficulties were reflected in the daily life of the CHW, some of them referred that in some communities they got their food stolen.

In these indigenous contexts, the relationship with the community is key. Many factors contribute to having a good relationship with the community. Literature that suggests that a shared set of values, beliefs, language, and cultural identity, were key to building trust and understanding between CHWs and communities.²⁸ For both the CHW and HA, being from the same community or at least speaking the same language is one of the most important factors for success. If a community member invites them to eat, or helps them by giving them a piece of their farms, the CHW and their families feel welcome. Moreover, if the CHW participates in all the activities of the community they become more accepted. Some CHWs mentioned that being a parent also helps because people feel that they have the authority to talk about topics like raising a kid and even help during deliveries.

To be a real link between medical systems, CHWs have to work with traditional healers. All the interviewees emphasized that although the process took time, they learned to work well together. All the CHWs interviewed had examples of patients they managed together with a traditional healer.

“We had to meet, to talk with the Payé (Traditional healer), because they said that medication from the whites is one thing, and the traditional is another. Many were against western medicine. Why? Because they thought that if they prayed and you gave them medication, then the traditional medicine wouldn’t have an effect. And that was their thinking. But Payes are very conscious of things, and little by little understood more, right? Well, that’s good, because there are two diseases, there are two types of medication.”*
(CHW_1)

* “Praying” in this context indicates healing

In Colombia, indigenous communities are organized in associations of traditional indigenous authorities (AATIS *Asociaciones de Autoridades Tradicionales Indígenas*), which are their own stewardship entities. They have an important role participating in decision-making processes regarding their communities. Most of the CHWs mentioned how, in some areas, the members of AATIS helped them develop their activities. Furthermore, sometimes the AATIs also participated in conducting evaluations of the CHWs’ performance and the CHWs felt it helped to improve their work.

Geographical barriers

Another important contextual factor that has shaped the role of CHWs in Vaupés is the difficult access to the communities and more specialized health care. Most of these communities are only reachable by boat or plane. Therefore, the referral and transportation of patients is an important task for the CHW.

“Then I had to bring a large trunk there, hang a hammock, and we put the patient in [it].

We started carrying – around 6 hours carrying the patient, about four people. We had to

rest and continue. No, no, we were [feeling] bad, and after we got to the river, we had to go downstream. [There were] rapids. That was a really hard thing and you didn't know what to do, you know? To fix a line and give intravenous fluids – no, that's too complicated there.” (CHW_7)

This situation also happens in other parts of the Amazon region. One study in the Brazilian Amazon, mentions that CHWs had an important role of “going to hospital with a sick person”²⁵ which is not always the case in more urban and semi urban settings.

Health impact of community health workers

All the interviewees emphasized that with the changes in their role and shorter contracts, the health outcomes of the populations are worse. Nevertheless, some authorities reported that it was impossible to measure the impact of CHW on populations' health outcomes because of the lack of epidemiological data. Other authorities have examples from their own experience that reflect their belief about the impact that the CHW can have in a community in terms of health outcomes.

“There were between three and four years without mortality due to snake bites, that was spectacular. [CHWs managed most cases locally]. It is a catastrophic event, it's an accident, but it tests absolutely everything, because there you can see all the failures in quality, all the failures in accessibility, all the failures in opportunity. That is what the new system defines as the fundamental pillars of health care. Then an event like those is a variable that allows you to evaluate... now we have three to four deaths per year. That is shaming, is shaming. With a population of 17000 —that is the population at risk in the rural area—, it's one of the highest [mortality] rates in Latin America, almost in the world.” (HA_7)

In addition to experiential knowledge of HAs, there is literature that suggests that the health care reform did not reach its goal of guaranteeing universal health coverage and equitable access to high quality care.^{22 29} Some key indicators like child mortality due to preventable diseases such as acute respiratory infections increased in the amazon region from 2005 to 2010, and the deaths due to diarrhea are 47 times higher in Vaupés than national rates.³⁰

There is also evidence showing the potential of CHW, especially in areas like promoting immunization uptake in children, increasing breastfeeding, improving TB cure rates, reducing child morbidity, and neonatal mortality, and in increasing the likelihood of seeking care for childhood illness.^{2,31,32,6,33} Taking into account the high infant mortality rates in Vaupés, and the evidence that suggests the potential of community health workers, supporting and strengthening the role of CHWs in this area seems like a clear approach.

Possible role in the post conflict scenario

Some HAs and CHWs mentioned that the current peace conversations in Colombia could lead to another promising change in the role of community health workers in the post conflict scenario. Two additional functions that could enhance the CHWs role in this scenario are 1) to become mediators and help in conflict resolution and 2) recover the State's presence and the communities' trust in institutions. However, some CHWs mentioned that this scenario could be challenging given that some former guerillas who displaced people or threatened CHWs are going to go back to the communities and some may become CHWs.

Additionally, some HAs mentioned how the national budget goes primarily to the military because of the internal armed conflict. This has led to underfund social programs. In a post conflict scenario, there could be more investment in social programs.

“The system is currently underfunded, because it has the resources to provide health care services, but promotion and prevention services are totally underfunded, because you know, there was a [budget] cut of more than 70% in public health this year in all the programs, that’s absurd... [] What happened is that the country has invested, and continues to invest too much in the war; then it should invest more, do more social investment. Then health and education should be the main investment areas. It is my personal opinion that the State should work more towards social investment and not that much in this other things [like war]” (HA_4)

The post-conflict scenario provides an opportunity to strengthen the health system, and CHWs can be key in this process. There is evidence for the ability of CHW to play this important role in post-conflict settings from Afghanistan, where CHWs have facilitated the engagement of the community in strengthening the health system and the information about the community they report has helped in decision-making processes.³⁴

Conclusions and recommendations

The CHWs’ role in Vaupés, Colombia has been changing dramatically in the past couple of decades, negatively affecting the health outcomes for many marginalized communities. CHWs in Colombia have been very vulnerable to global, contextual and external factors, such as

international aid policies, structural adjustment programs, health care reform, internal conflict, and narco-trafficking.

At the same time, our results highlight the key position CHW can have, bridging two medical systems and contributing to the improvement of health outcomes in isolated communities. It is important to highlight that in contexts like Vaupés, there is a need to create health models tailored to the culture of the communities that take into account difficult geographical access. Part of these models should consider that in isolated areas it is important to allow CHW to have some problem solving capacity given that there is no access to other services. Furthermore, this clinical role also allows them to have better relationships with the communities and therefore better perform their health promotion and prevention duties.

As described above, with Law 1438 of 2011, Colombia adopted the Primary Care Strategy¹⁵ and CHWs can be key in the implementation of this strategy, as the Alma Ata declaration envisioned.¹ But for it to be successful, CHWs must be meaningfully integrated into the health system and effectively linked with other levels of care rather than isolated figures in the communities.

As said by several of the interviewees, economic resources are required to reestablish the figure of the CHW and assure its sustainability. The post-conflict scenario can be an opportunity for this. Not only because economic resources will be freed up, but also because the figure of the CHW could play an important role in peace building and conservation inside the communities, as well as help in the process of recovering communities' trust in the State.

The characteristics of Vaupés make it a good example of a place where CHWs could be crucial and their role should be rethought and reoriented to respond to the needs of communities in this new context, taking into account the experience acquired over decades. Furthermore, it is important to include indigenous organizations and traditional authorities in the process of rethinking and reorienting the role of CHW to ensure that it meets the communities' needs and expectations.

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