Epidemiology and Population Health: By the Population (Community Health Workers) and for the Population

Epidemiología y Salud de la Población: Por la Población (Trabajadores de Salud de la Comunidad) y para la Población

"Who built Thebes of the seven gates?
In the books you will read the names of kings.
Did the kings haul up the lumps of rock?"

Questions from a worker who reads
Berltolt Brecht

INTRODUCTION

Hope is once again reborn with the possibility that *Community Health Workers* (CHWs) may improve the appalling morbidity and mortality rates in low income African countries, similar to those for European populations in the 19th century, but now well into the 21st century.

Recently, Prabhjot Singh and Jeffrey Sachs asked for the creation of one million *community health workers* in Sub-Saharan Africa.

Their petition begins as follows: "*During the past 10 years, community health workers (CHWs) have emerged as a focal point of international discussions of primary health care systems. Although lay community-based health workers have been active for at least 60 years, the Millennium Development Goals (MDGs) in 2000 prompted new discussion of how these workers can help to extend primary health care from facilities to communities. CHWs have since been part of an international attempt to revise primary health care delivery in low income settings, and CHW programs have been changed accordingly. Instead of being regarded as unpaid, lightly trained members of the community who focus mainly on health education and provide basic treatments, CHWs are increasingly envisioned as a trained and paid corps who give advice and treatments, and implement preventive measures.*" (1)

This new approach seeks that *community health workers* do not turn into a parallel, but elementary and poor system of the current health system but for them to become part of it, included in the health care system of every country. Therefore, they state that:

"*A key difference between the old and new CHW models is that workers are now viewed as an integral and formal part of the health system, with reporting lines, training, supervision, and feedback. Several developments have stimulated efforts to develop a more substantial role for CHWs in primary health care; new mobile health technologies, household-administered rapid diagnostic tests, and expert support systems based on information and communication technologies (ICTs) are greatly enlarging the range of services that CHWs can effectively provide.*" (1)

New information and communication technologies are improving learning, training, and supervision methods. As a result, protocols based on evidences that can be applied to communities are easier to show and consequently their effectiveness is simpler to measure. (2)

The Earth Institute at Columbia University organized a Technical Taskforce to examine the best practices for scaling up and integrating CHWs into health systems. The Taskforce (3) agreed that to achieve that goal, roughly one million CHWs should be trained and deployed in sub-Saharan Africa.

The assumption was that a minimum of one CHW per 150 households (approximately 650 people) was needed, with 1 trained CHW supervising 6 CHWs. Since a typical village site (cluster) has between 30,000 and 80,000 residents, 8 to 20 senior CHWs would interact with a healthcare center. The CHW subsystem costs roughly USD 6.56 per person per year to cover the disseminated rural population, with a global cost of 2,300 million per year.

However, there are CHWs not only in Africa but also –though hard to believe– in the USA. There are about 120,000 CHWs working in neighborhoods, homes, schools, workplaces, community-based organizations, health departments, clinics, and hospitals throughout the United States. Some are volunteers, but it is estimated that more than two thirds are paid. (4)

COMMUNITY HEALTH WORKERS

Lehmann and Sanders, representing the World Health Organization, make a review of CHW programs. They ask themselves: What do we know about the performance of CHW programs? The state of evidence on programs, activities, costs and impact on health outcomes when using community health workers. (5)

The authors declare that attention to reliable and adequate training and management is crucial and is often sorely neglected in CHW programs. They add

SEE RELATED ARTICLE: Rev Argent Cardiol 2016;84:179-182. http://dx.doi.org/10.7775/rac.v84.i2.8229

that not only are these programs located in the geographical and cultural periphery of the health system but are also the most neglected aspect of the formal health organization. While these programs need particularly careful, attentive and sustained management, in practice, they are neglected and not included in the list of priorities due to their ill-defined ownership and accountability.

There is no doubt that these CHWs are critical to reach the population and provide easy access to the health system. With culturally similar people, they develop a relationship of trust among peers with the population in charge, rather than the hierarchical supplier-customer relationship of the formal health system, including care activities performed immediately before resorting to the conventional health system, together with on-site efficient health prevention and promotion. Rather than due to their clinical skills, these relationships together with the workers' ability to communicate openly with people's health issues become an essential tool within a primary health care program.

While the different aspects of CHW management will be discussed separately, piece by piece for the purpose of analysis, we should not forget that the success of the program will depend on the success in every instance of its implementation and development.

Recruitment and Selection

Virtually every document discussing CHWs emphasizes: (a) that CHWs should be chosen from the communities they will serve; and (b) it is not negotiable that the community does not participate in the selection of its own CHWs and that this is performed outside the community by the direct influence of health or state officials. Although health workers are chosen from the community, the significant and direct participation of the community itself in the selection process is uncommon, though it should not be so.

In this way, they would have responsibility towards the community they should serve, for which they will be trained and supported by health officials.

The best action would be to set up a Community Health Committee (CHC) consisting of local health officials, the institution conducting the training, organizations representing the community (director of the local newspaper, local leaders, etc.), and interested community men and women (respecting the representation of the elderly and with gender equity). This should be the group responsible for the selection of candidates to become CHWs.

In conclusion, while there is agreement in the local community regarding CHW selection, the participative selection process has rarely been respected in the programs developed so far.

Initial Training and Continuing Education

Training length and depth, and the organization responsible for the program approach have to be defined.

In some places of Africa, training is extremely simple: it is carried out at the same rural clinic where they will practice, lasts for 7 to 10 days and is repeated every year to introduce new topics. In other African countries, training lasts 3 months; it is personalized or in groups, and is updated twice a year.

Programs have been changing over time. At the beginning they seemed inappropriate, and it was very common to deliver too many or complicated lectures in classrooms.

In fact, programs should focus on the abilities and competences required from CHWs, with standardized steps so that they can acquire specific skills. The competences achieved during training should be evaluated by the supervisor, with frequent follow-ups and written tests by checklists.

Some programs recommend that training takes place in the same community rather than in health care sites, so that CHWs train in the setting where they will work. Perhaps the best would be a combination of on-site practical instruction and formal training in the places where their patients are.

The instruction material for CHWs should be specifically adapted from the general programs developed by local or international organizations and institutions.

Visits to pregnant women and children below 5 years of age (6) and management and prevention of non-communicable diseases, mainly cardiovascular diseases, diabetes and some types of cancer, should be considered priorities. (7)

However, there is agreement on one matter: continuing or periodically updated training should be as important as initial training, (8) because if regular refresher training is not available, acquired skills and knowledge are quickly lost.

Some consider that 3 days of additional training per year improve the quality of the services provided by CHWs most widely used by the community.

We propose that the initial primary health care team –made up of general practitioners and family doctors, nurses, supervisors and a medical coordinator– should develop the program and the instruction manual for CHWs, and should discuss them at the CHC before their implementation.

Supervision and Support

The literature points out that success of CHW programs depends on regular and reliable support and supervision. Unfortunately, supervision is the weakest point of CHW programs, because its cost is not even considered in many programs, though we should bear in mind that it is necessary in order to have an efficient system.

Therefore, clear strategies and procedures for supervision need to be well defined in the programs. At an early stage of the program, supervision and support can be made by the formal health personnel in

the team, maybe doctors and nurses. At a later stage, the most capable CHW leaders should be selected and provided with thorough and more systematic training so that they become the specific supervisors of their workmates.

In addition, continuous supervision reduces the sense of isolation in CHWs when they are working on-site, and sustains their interest and motivation in the task to be developed.

Another form of support is provided by infrastructure and particularly drug supply, equipment, and sometimes transportation logistics. If this fails, CHWs cannot perform their tasks satisfactorily, and their position within the community is undermined, destroying their credibility.

This leads to consider logistics of CHW programs as part of the need to strengthen primary care services in all their components.

GOVERNMENT, POSSESSION AND RESPONSIBILITY

The literature also unanimously expresses that CHW programs should be in possession of and directed by communities, as well as the responsibility of these communities. However, it is also true that the reality of programs diverts to a great extent from these ideals. This section will discuss community participation, and the relationship between CHWs and formal health services.

Community Participation

It is not very clear what "*community participation*" means and what its purpose is. Some people distinguish *passive mobilization* of community resources (population, materials, etc.) to carry out health care programs from *active participation* of the community, which involves increasing population control of the social, political, financial, and environmental factors determining their health. However, current discussions are much more pragmatic and technical, revealing the gap between an ideal program directed and in possession of the community and the existing current programs.

However, programs require possession and active participation of the community as an unquestionable prerequisite to be sustainable and impact on reality. Active participation occurs and is easily sustained at moments of rising popular mobilizations, during profound changes in society. In other words, popular mobilization precedes and accompanies the establishment of CHW programs.

Perhaps it is necessary to consider community participation as an iterative learning process, with an eclectic approach suggesting that the community builds its ability to act while increasing its participation. Community health workers should not be expected to mobilize the community; they should work with the active support of mobilized communities.

There is vast, complex and contradictory literature about the type, role and organization of community participation in health care in general and of CHWs in particular, and each new program should determine the community participation and importance.

Relationships with formal health services

Health personnel are trained and socialized within the hierarchy of disease-oriented health systems, and have little knowledge and poor training on genuine health prevention, which hinders their active support in the development of the concept and practice of primary health care. Community health workers are perceived as simple aides in needy populations, who are deployed as assistants in health care settings. This completely false concept of the CHW activity in the promotion and training of the population in which they are immersed, associated with the sense of superiority formal health personnel usually have, has often been viewed as a problem in connection with a CHW system which is considered the natural mediator between the population and the health system.

Incentive Policy

Despite the different aspects on incentives, the dominant question is: Should CHW work be paid or volunteer?

Volunteering is often highlighted, albeit with good intentions, not considering the fact that CHWs belong to poor populations living in those poor communities and need an income for their work to be able to live and support their families. Income will also allow their professionalization and respect from their peers, their sense of usefulness, and will help them not to give up the important work they do.

Their income should be a salary or fee recognized and supported by the health system.

Incentives that impact on motivation and prevent CHWs' emotional exhaustion include, in the first place, the community acknowledgement and respect of CHW work, the acquisition of valued skills, and personal growth and development.

Payment to CHWs may turn into a problem if money is not enough, payment is not made on a regular basis or is totally canceled, or some members get paid but others do not for the same work.

Non-monetary incentives include being part of the health care system through support from supervisors and adequate training. Some simple things, such as an identification badge or shirt, can give them the pride of belonging and a status within the community.

Peer support includes regular work with other CHWs, frequent refresher training among them, or even CHW associations representing them.

Many successful programs use multiple incentives over time to keep CHW motivation. The CHW program should make a systematic effort to plan multiple incentives over time to build up a continuing sense of satisfaction and fulfillment in CHWs.

SUMMARIZING THE LESSONS LEARNED

There is agreement that *community health workers* can make a valuable contribution to community development and, more specifically, improve community access to and coverage of basic health services and preventive and promotional health policies.

Let's take the example of the living conditions at *Villa 31* and *31 Bis* (shantytowns), which were born in the 1930s and that with various ups and downs survive until today. It comprises 100 blocks with informal dwellings, half of them with 1 to 3 rooms; with floors made of cement or tiles, the walls mostly made of bricks, 2 out of 3 roofs made of concrete, while 1 out of 3 consist of metal sheets.

About 35% are ground-floor dwellings, 42% have ground and first floor, and the remaining 23% have two or more floors. Water supply mostly comes from the public water system, and the bathroom or latrine drains into the sanitary network, although just over half of the dwellings have a flushing system with chain or push button. Regarding ownership, 2 out of 3 homes are owned, while 1 out of 4 is rented. (9)

In the 2010 census, a total of 7,950 homes with 27,000 inhabitants were registered in *Villa 31* and *31 Bis*. However, an opinion article in the newspaper *La Nación* (2014) argues that there are 40,000 inhabitants, while another article from the same year says that 35,000 people live in those shantytowns.

Almost half of the residents are Argentinian (48.9%) and the other half (51.1%) come from Latin American countries: Paraguay (23.9%), Bolivia (16.6%), Peru (9.8%), and other countries (0.8%).

If we set up "primary health care" teams to be in charge of 875 persons belonging to family groups of all ages, and the estimation is 35,000 inhabitants, we would need 40 teams.

Each primary health care team would include: A general practitioner or family doctor, a nurse, two community health workers, and a medical primary care supervisor (one every 10 general practitioners).

In order to make an effective contribution, CHWs need to be carefully selected, appropriately trained and, most importantly, adequately and continuously supported in their training, management, and logistics.

Community health worker programs should not be considered weak and unstable health systems or a cheap option to provide access to health care for underserved populations.

By their very nature, CHW programs are vulnerable unless they are, owned, driven by and firmly embedded in communities themselves. This means that community participation does not become an alternative but an integral part of the State's responsibility for health care delivery.

While there is a lot to learn, there is a lot we do know about making programs work better: with appropriate selection, continuing education, involvement and reorientation of health service staff, with curricula of care and improvement of supervision and support as non-negotiable requirements.

A correct appreciation of CHWs allows us to recognize that if there is political will governments can adopt flexible approaches in CHW program planning within the context of global health activities, instead of considering it as a separate activity. Under these conditions, CHWs represent an important resource to improve access and adherence to treatment for diseases and also the health outcomes of the population, and to strongly contribute to health prevention and promotion activities, taking quick steps towards improved health care for many Argentinians

Dr. Hernán C. Doval[MTSAC]
Director of the Argentine Journal of Cardiology

REFERENCES

1. Singh P, Sachs J. 1 millon community health workers in sub-Saharan Africa by 2015. Lancet 2013;382:363-5. http://doi.org/f2f52n
2. Lewin S, Munabi-Babuqumira S, Glenton C, Daniels K, Bosch-Capblanch X, van Wyk BE, et al. Lay health workers in primary and community heath care for maternal and child heath and the management of infectious disease (review) Cochrane Database Syst Rev 2010. 3:CD004015.
3. Singh P for Technical Task Force. 1 million community health worker: global technical taskforce report. http://www.millennium-villages.org/uploads/ReportPaper/1mCHW_TechnicalTaskForceReport.pdf (accedido 30 de enero 2016)
4. Rosenthal EL, Brownstein JN, Rush CH, Hirsch GR, Willaert AM, Scott JR, et al. Community health workers: part of the solution. Health Affairs 2010;29:1338-42. http://doi.org/b6n43c
5. Lehmann U, Sanders D, for WHO. Community health workers: what do we know about them? The state of evidence on programmes, activities, costs and impact on health outcomes of using community health workers. http://www.who.int/hrh/documents/community_health_workers.pdf (accedido 30 enero 2016)
6. Lewin S, Munabi-Babiqumira S, Glenton C, Daniels K, Bosch-Capblanch X, van Wyk BE, et al. Lay health workers in primary and community health care for maternal and child health and the management of infectious disease (review) Cochrane database Syst Rev 2010;17:CD004015. http://doi.org/crjsqq
7. World Health Organization. Package of Essential Noncommunicable (PEN) Disease Interventions for Primary Heath Care. In low-resource settings. 2013 apps.who.int/iris/bitstream/10665/133525/1/9789241506557_eng.pdf?ua=1.
8. Gaziano TA, Abrahams-Gessel S, Denman CA, Montano CM, Khanam M, Puoane T, et al. An assessment of community health workers´ability to screen for cardiovascular disease risk with a simple, non-invasive risk assessment instrument in Bangladesh, Guatemala, Mexico, and South Africa: an observational study. Lancet Glob Heath 2015;3:e556-63. http://doi.org/bdcm
9. Información de una encuesta propia, aun no publicada.