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### The divergence between community case management of malaria and renewed calls for primary healthcare

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## The divergence between community case management of malaria and renewed calls for primary healthcare

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Thirty years after Alma-Ata, there has been an upsurge of interest in community health workers (CHWs) in low- and middle-income countries. This echoes several strategic policies recently endorsed by the World Health Organization and its global call to re-establish the primary healthcare (PHC) policy. However, we are witnessing a reframing of this approach rather than its renewal. In particular, the way CHWs are conceptualized has changed considerably. Far from serving as promoters of social change and community empowerment, today we expect them to act as front-line clinicians. This medicalization of CHWs results from a systemic erosion of health promotion's influence over the last 20 years. Community case management of malaria perfectly illustrates this shift towards a pragmatic, medically centered, use of CHWs. Taking this example, we will discuss the pitfalls of this task-shifting strategy put forward by international health actors, and make suggestions to reattribute a mission of health promotion to CHWs, as intended by the Alma-Ata's PHC policy.

**Keywords:** malaria; community case management; community health workers; primary healthcare; health promotion

### Introduction

As the incarnation of the third public health revolution, Breslow (1999) considered that health promotion should be intended to improve the health reserves of populations no longer threatened by early mortality. According to him, health promotion emerges from a shift of priorities; rather than struggling against the burden of diseases, public health now dedicates itself to improving the health potential of individuals. Departing from this concept, Catford (2007) stated that the most important challenge facing the field is to persuade low- and middle-income countries (LMIC) to adopt health promotion programs, despite the fact that infectious diseases still cause a considerable number of premature deaths (Black et al., 2010). The conceptualization of health promotion as interventions aimed at reducing health inequities through the empowerment of populations (Ridde, 2007) allows its juncture with global health – the latter defined as 'collaborative trans-national research and action promoting health for all' (Beaglehole & Bonita, 2010).

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Despite efforts to encourage this juncture (Allegrante, Barry, Auld, Lamarre, & Taub, 2009), the challenge of implementing health promotion approaches in Africa remains colossal (Houéto, 2008; Sanders, Stern, Struthers, Ngulube, & Onya, 2008). In the following pages, we analyze this situation by examining the use of community health workers (CHWs) in remote areas – a decade-long strategy currently regaining popularity in LMICs (Haines et al., 2007). We argue that in the 1970s, during their first wave of use, CHWs were primarily seen as health promoters to their community. In contrast, their present role is centered on the management of sick people. This shift results from a structural reorientation of global health policies and of development tenets, themselves inextricably rooted in the economic governance system.

We focus on the fight against malaria for several reasons. First, the World Health Organization (WHO) acknowledges the prominent role that CHWs play in the fight against malaria. They are at the heart of the strategy called ‘community case management of malaria’, whose mandate is to reduce malaria mortality by the presumptive administration of treatments to febrile children in villages (WHO, 2004). Moreover, this strategy is popular in Africa, where more than 30 countries have implemented it, sometimes on a large scale (Greenwood, Bojang, Tagbor, & Pagnoni, 2011). Finally, malaria remains one of the most important public health priorities in sub-Saharan Africa. Despite a recent trend suggesting a decline of malaria on the continent, every year it still causes the death of a million African individuals, mostly children under five (Murray et al., 2012).

By conceptualizing CHWs as front-line clinicians rather than as agents of social change, the case management of malaria becomes flawed. In the following pages, we will first retrace the origins of this conceptual alteration and show how the medicalization of CHWs has recently been accelerated in the fight against malaria. We argue that this tendency harbors serious pitfalls that could undermine the potential to reduce the burden of malaria. Answering a call to depart from the growing trend of biomedical conceptualization of CHWs (Campbell & Scott, 2011), we conclude by providing some suggestions on how to reintegrate the use of CHWs from a health promotion perspective.

## **Resorting to CHWs: a strategy contingent on the context**

### ***The primary healthcare policy***

During the 1970s, three important factors led to a reorientation of health policies in LMICs: (i) the recognition of health as a key component of a country’s development process; (ii) the acknowledgment that replicating occidental medico-centered systems encouraged health inequalities while ignoring the basic health needs of the majority of the population; and (iii) the attraction of programs that successfully used local actors to empower communities – such as the Chinese barefoot doctors (Van Lerberghe & De Brouwère 2001; Walt & Gilson, 1990).

The Alma-Ata Declaration of 1978 was an attempt to address these challenges. It led to the adoption of the primary healthcare (PHC) policy, a global strategy embedded in principles of equity, community responsiveness and the de-medicalization of health. Defined by the WHO and UNICEF, PHC prefigured the health promotion approach through its focus on interdisciplinarity, a network of practitioners from different disciplines, a holistic definition of health, community participation, individual empowerment and reduction of inequities (Bhattacharyya, Winch, Leban, & Tien, 2001; Campbell &

Scott, 2011; Lehmann & Sanders 2007; Low & Ithindi, 2003; O'Neill, Pederson, Dupéré, & Rootman, 2007).

The idea of providing basic healthcare to all and of contributing to the self-determination of communities became a reality through the use of CHWs, a strategy so popular in the 1970s in LMICs that it sometimes overshadowed the PHC policy it was part of (Christopher, Le May, Lewin, & Ross, 2011). As a member of the community that selected him or her, and within which in which they resides, the ideal type of CHW is defined by the Alma-Ata as an actor capable of inspiring change, even if the training received is of short duration (WHO & UNICEF, 1978). For example, recruiting CHWs from women or disadvantaged individuals has been a mechanism to reconcile community self-determination, social change, and the reduction of inequities (Walt & Gilson, 1990).

The literature has theorized this political (Walt & Gilson, 1990) – rather than pragmatic (see below) – dimension of CHWs, corresponding to a model of health promotion interventions (Standing & Chowdhury, 2008). Such a model has been successfully applied at the local level, with interventions still active three decades later (Arole & Arole, 2009; Chowdhury, 1981). However, successful implementation at the national scale is extremely rare. The main weaknesses of this model have been identified as threefold: the difficulty of generating community participation from the outside (Rifkin, 1996); the rigidity of and interactions with local structures (especially power) (Walt & Gilson, 1990), and CHWs' double allegiance to the system and the community (Standing & Chowdhury, 2008).

### *Selective PHC*

While CHWs were officially intended to empower communities, most PHC programs established after Alma-Ata have instead given CHWs the mission of extending access to the healthcare system. Essentially, they started managing one or several of the most prevalent local diseases, specifically by presumptively administering modern treatments. Lehmann and Sanders' literature review (2007) showed that, beginning in the early 1980s, CHWs were mainly involved in interventions targeting specific diseases or medical conditions (e.g. tuberculosis, malaria, acute respiratory infections, and reproductive health). The therapeutic role assigned to CHWs corresponds to a pragmatic vision (Walt & Gilson, 1990) that reinforced the medical paradigm from which the PHC policy had sought to extricate itself. The perception of CHWs as ancillary cheap clinicians – or sometimes as simple drug distributors – gradually superseded their health promotion mandate (Campbell & Scott, 2011).

Many reasons have been proposed to explain this preponderance of the pragmatic over the political dimension. Hall and Taylor (2003) argued that the distortion of Alma-Ata principles was the result of Western experts' and politicians' opposition to the emancipation of LMICs and fear of losing control of the path to health development. Furthermore, many programs pursuing an empowerment perspective took place in Communist-leaning countries. This could have urged Western organizations and advisors to elaborate and promote the *selective* PHC policy (Warren, 1988), which contributed to reinforcing the verticalization of programs and the role of the medical experts among them (Unger & Killingsworth, 1986). These sectorial and supervised programs were better suited to appease the concerns of good governance formulated by international aid organizations than the perspective of endogenous development promoted by Alma-Ata (Hall & Taylor, 2003). Beyond these political considerations, international organizations

also promoted selective PHC because of its alleged superior cost-effectiveness. Adopting simple interventions to fight the most common diseases was in line with donors' growing concerns for measurable aid goals. Arguably, selective PHC supported the new management objectives better than the PHC policy (Cueto, 2004).

Several literature reviews have highlighted the capacity of vertical disease-oriented interventions to reduce mortality and morbidity (Christopher et al., 2011; Haines et al., 2007; Lehmann & Sanders, 2007). However, an equally abundant literature details significant issues raised by the medicalization of CHWs, including: the scaling-up and sustainability of programs; CHWs' training, supervision, and remuneration; drug supply and preservation; quality of care; and the accuracy of diagnoses (Berman, Gwatkin, & Burger, 1987; Rifkin, 2009). Large-scale programs were often hampered by the lack of resources and support allocated to CHWs – they were rarely remunerated. Combined with resistance coming from medical and nursing associations, this created a gap between CHWs and the health system and prevented this strategy from reaching its full potential (Perry & Zulliger, 2012).

### ***Decline of CHWs***

While these intrinsic difficulties certainly limited the success of CHWs, the economic and financial crisis of the 1980s seems to have accelerated the decline of community programs by way of different mechanisms (Cueto, 2004; Standing & Chowdhury, 2008; Walt & Gilson, 1990). Already suffering from underfunding as a result of the perception that resorting to CHWs led to lower costs in implementing PHC (Berman et al., 1987), the financial crisis and ensuing budget cuts have been blamed for the rapid erosion of national programs that employed CHWs (Lehmann & Sanders, 2007).

However, beyond the temporary deterioration caused by the economic recession, there was a persistent decline of community programs. This reflects the advent of a neo-liberal ideology which, in opposition to the development paradigm of the 1970s, held a narrower view of state intervention (Mills, Bennett, & Russell, 2001; Rist, 2001). In Africa, this redefinition of public policies culminated with the adoption of the Bamako Initiative in 1987. The restructuring of health services stopped most of the nation-wide programs using CHWs to implement the selective PHC policy.

The Bamako Initiative also aggravated the demise of community-based programs aimed at social change. The resulting sectorialization, privatization, and introduction of direct payment steadily undermined further health promotion initiatives in Africa (Houéto, 2008). Even the principles of community participation and accountability were often overlooked in favor of the introduction of user fees, which in fact has increased inequities in access to healthcare (Ridde, 2011; Turshen, 1999). It is noteworthy that in Western countries as well, the onset of neoliberalism gradually relegated the field of health promotion to the background (Labonte, 2007). The fact that its decay was hastier in Africa is partly due to the subordination of African states to International Financial Organizations (Bhatia & Rifkin, 2010). The conditions imposed by these organizations led to health policies subordinated to neoliberal imperatives of commodification.

## **The resurgence of CHWs in the fight against malaria in Africa**

### ***The medicalization of CHWs***

By the end of the 1990s, the WHO ceased to include CHWs in its main policy statements. For example, it mentioned CHWs only twice in the *World Health Reports* of

1998, 1999, and 2000 combined. Yet, the growing human resources crisis in LMICs has gradually re-established CHWs on the global health agenda. While the HIV pandemic catalyzed global and massive funding for programs against infectious diseases (Sanders, Todd, & Chopra, 2005), health system weaknesses in LMICs – including the lack of qualified health personnel and their brain drain to Western countries – produced a human resources crisis. This particular context renewed the interest of international health institutions in CHWs (Haines et al., 2007), and their use as palliatives for deficient health systems took different forms. For example, in regards to the HIV/AIDS pandemic, the WHO defined a task-shifting strategy in order to give CHWs a primary role in managing HIV+ persons (WHO, 2008a). In the fight against malaria, the WHO and the Roll Back Malaria partnership propelled CHWs forward via community case management of febrile children.

CHWs have been contributing to the fight against malaria for the last 50 years, performing a variety of tasks. They have acted as purveyors of community empowerment or as health system proxies (Atkinson, Vallely, Fitzgerald, Whittaker, & Tanner, 2011). Nevertheless, several milestones over the last 15 years have repositioned them on this spectrum: the creation of the *Roll Back Malaria* partnership; the establishment of the *Global Fund against HIV, Tuberculosis and Malaria*; and the adoption of artemisinin combinations as new first-line treatments. This availability of funds and effective new pharmacotherapies, in conjunction with a strategic reorientation from malaria eradication to containment, paved the way to a medicalization of both malaria and CHWs.

Indeed, since 2004, the WHO has officially recommended community case management of malaria (WHO, 2004). This strategy consists in training CHWs – chosen by and within communities – to follow a simplified therapeutic algorithm. This algorithm usually asks CHWs to presumptively administer pre-packaged antimalarial medication to febrile children without danger signs. The WHO recommendation relies upon evidence showing that childhood malaria episodes are much more lethal if they are not rapidly treated with effective medication (D'Alessandro, Talisuna, & Boelaert, 2005), a common situation in many African countries due in part to the weak coverage of their health system (Kager, 2002).

Community case management of malaria thus explicitly assigns to CHWs the mission of extending healthcare coverage. The logic of intervention consists in reducing geographical and monetary barriers hindering consultations. Recent studies tend to confirm both the acceptability and the efficacy of using CHWs as front-line clinicians in the fight against malaria (Ajayi, Browne, Bateganya, et al., 2008; Ajayi, Browne, Garshong, et al., 2008; Akweongo et al., 2011).

### ***The limited potential of community case management of malaria***

Despite promising results in controlled studies, using CHWs to manage malaria cases harbors several pitfalls in most sub-Saharan African countries. First, although some successes have been reported in Asian countries (Yasuoka et al., 2012), the lack of a functioning health system infrastructure in many African countries seriously restricts CHWs' ability to overcome these barriers. And yet, community case management of malaria as such does not provide innovative solutions to these well-known problems (CHWs' training and supervision, drug supply, collaboration with health personnel, etc.).

Second, the issue of community participation is to a large extent ignored in this strategy, despite the fact that it is critical to establishing the uptake and effective use of

new health services by the population (McCoy, Hall, & Ridge, 2012). Many cultural aspects, power dynamics, and other contextual factors are likely to reduce participation (Uneke, 2009). Several decades of underfunding and disregard for community interventions have worsened the situation by discrediting CHWs. A certain form of inertia is thus predictable – the population will continue to visit the health center instead of consulting with the village CHW, as the Burkinabe malaria program evaluation has demonstrated (SP/CNLS-IST, 2012).

While community case management of malaria ignores contextual and socio-historical factors of influence, it also artificially presents itself as an autonomous, separate intervention. But neglecting issues of integration with the health system inevitably generates incoherence. Why would a mother bring her child to a CHW knowing that drugs are only available one month out of two? Why would a CHW refer a severe case to the health center when the related costs are prohibitive to the household? In that sense, the medicalization of CHWs induced by this strategy demands a reinforcement of the local health system. It also calls for an integrated planning of interventions. Otherwise, they can be counterproductive and confuse individuals who want to receive treatment.

Administering a presumptive treatment to every febrile child has also come under scrutiny as an overly simplified algorithm, because it encourages misdiagnosis, over-medication, and increases the probability of the emergence of artemisinin combination therapies resistance (Aubouy, 2011; Charlwood, 2004). Furthermore, CHWs' difficulties in detecting danger signs may delay the appropriate management in severe malaria cases, diminishing their survival chances (Chinbuah, Gyapong, Pagnoni, Wellington, & Gyapong, 2006).

Finally, issues of sustainable funding, which aggravated the decline of community programs during the 1970s, remain unresolved. The underlying problem is that CHWs are not short-term solutions. To achieve their true potential as front-line clinicians takes several years and even decades of continuous support from relevant stakeholders, including local communities (Campbell, Nair, & Maimane, 2007). The WHO recommendations' vagueness concerning CHWs' incentives are unfortunate, since their absence generates CHW attrition and reduces their availability for consultation (Perry & Zulliger, 2012). By repeating the mistakes of the past, community case management of malaria will most likely transpose onto CHWs the human resources challenges it is supposed to answer, to the detriment of healthcare quality.

### ***Involving CHWs as health promoters***

In the strategies promoted by the WHO to fight malaria, CHWs are embedded in a biomedical paradigm of disease. It is noteworthy that the 2011 *Report on malaria* only considers their role as therapeutic agents (WHO, 2011). Scientific studies follow the same tendency, focusing on evaluations of CHWs' capacity to administer rapid diagnostic tests (Chanda, Hamainza, Moonga, Chalwe, & Pagnoni, 2011), or to use more complex algorithms in order to manage several diseases at the same time (Yeboah-Antwi et al., 2010). Reflecting on the case management strategy pitfalls and lessons of the past, we argue that new options should be examined.

A first suggestion is to adopt a more positive definition of health instead of only considering the treatment of disease. This implies restoring a mission of prevention to CHWs. For instance, while bed net promotion campaigns have experienced numerous problems which limit their success (Abdella, Deribew, & Kassahun, 2009; Korenromp et al., 2003), CHWs can be engaged in increasing the coverage of nets, their

maintenance, and appropriate use by the population (Haines et al., 2007; Perez, Ba, Dastagire, & Altmann, 2009). They can also serve as intermediaries between communities and the health sector, contributing to the adaptation of top-down interventions at local levels (Castro, Tsuruta, Kanamori, Kannady, & Mkude, 2009; Stevens, 1984). This is particularly relevant for interventions aimed at improving the physical environment and ambient sanitary conditions – a strategy inexplicably ignored by international recommendations (Utzinger, Tozan, & Singer, 2001).

Our second suggestion is to transcend the biomedical paradigm, and no longer consider malaria as an isolated disease, but rather as the expression of vulnerability caused by a combination of biological, social, economic, and environmental deficiencies (Ribera & Hausmann-Muela, 2011). The current model of CHWs being promoted as specialists contrasts with the call for a more holistic and comprehensive framing of malaria (Jones & Williams, 2004). Instead of training CHWs to manage malaria, acute respiratory infections, diarrheas, to name a few, they could be more effective working on the social and environmental determinants of health. Their experiential knowledge of the community represents a unique opportunity to work on complex dynamics such as sex inequalities, environmental hygiene, consultation practices, child education, etc. By neglecting these distal determinants of health, community case management of malaria may delay or relocate disease burden, but it will not empower communities to improve their own health or future.

Our last suggestion is to adopt a critical stance with regards to the repercussions of CHWs in their communities. Far from spontaneously emancipating their community (Rifkin, 1996), they can broaden health inequities if local power structures are not taken into account (Bhattacharyya et al., 2001). There is therefore an inherent dimension of social change in CHWs, which even a curative strategy such as the case management strategy cannot ignore.

## Discussion

This article contends that attributing a front-line clinician role to CHWs in the fight against malaria presents serious pitfalls. By retracing the historical and conceptual roots of CHWs, we argued that they primarily embody an aspiration for social change. It is only under this premise that they may eventually play a therapeutic role. Paluzzi (2004) arrived at a similar conclusion, stating that ‘A PHC system could incorporate a vertical program, but the opposite is not true.’

In many African countries, we observe that precedence is given to specific disease-oriented interventions rather than to PHC strategies. After decades of decline in the use of CHWs (especially regarding their political dimension), the renewed focus on them – in its present form – reinforces the tendency to implement vertical and sectorial programs. In this sense, community case management of malaria is similar to what others observed for HIV/AIDS, tuberculosis, respiratory infections, and diarrhea. The process of the medicalizing CHWs, triggered a few decades ago, has now reached its paroxysm in African countries with calls for an integrated community case management of several diseases (Perez et al., 2009; Ukwaja, Aina, & Talabi, 2011). According to this policy, CHWs are regenerated as *mini-doctors*, to use Walt and Gilson’s (1990) expression.

This direction seems rash given that the few evaluations of community case management of malaria with artemisinin combination therapies have generally taken place only in a research context. Therefore, we know little about the strategy’s efficacy and

effectiveness under real-life conditions. Implementation studies are also expected in order to document central issues such as interactions with the context, mechanisms by which actors react, sustainability of the intervention, scaling-up challenges, etc. Until the results of these studies are available, an extension of the community case management model to other diseases is premature and refutes the WHO's recent call for evidence-based public health policies (WHO, 2012). Furthermore, the utility of CHWs in compensating for health system structural deficiencies and for human resource shortages is still to be debated (Schneider, Hlophe, & Van Rensburg, 2008). Without further evidence, it seems inappropriate to scale-up or extend a strategy whose premises themselves are still contested.

More fundamentally, this strategy contradicts several international initiatives and subsequent national health policies. First, the presumptive administration of drugs by CHWs (whether antimalarial or antibiotics) undermines decades-long endeavors by the WHO to promote a rational and efficient use of drugs. The development of rapid diagnostic tests (for parasitological, viral, or bacterial infections) would not radically improve the situation since medicalizing CHWs relies upon a reductionist conception of disease – not to mention of health. Consequently, we share Aubouy's (2011) concern that the creation of a parallel, second-rate, health system is a very plausible prospect. At the same time, numerous studies have recently shown that the removal of user fees in a health system considerably improves accessibility, including for suspected malaria cases (Heinmuller, Aly Dembele, Jouquet, Haddad, & Ridde, 2012; Ridde & Morestin, 2011). Instead of the superimposition of new agents, growing evidence calls for a refunding of African health systems, a strategy increasingly echoed by the international community. Medicalization of CHWs undermines these efforts.

Another striking paradox stems from the fact that the pragmatic and medico-centered conception of CHWs prevails at the same time that the WHO is restoring the PHC approach at the core of the global health agenda; the 2008 World Health Report was even named *Primary healthcare: now more than ever* (WHO, 2008b). Although some do not see contradictions between the two phenomena, our analysis suggests that the pragmatic conception of CHWs (as specialists) takes precedence over its political dimension (as actors of social change). It is misleading to integrate community case management in the wave of renewed calls for PHC (Christopher et al., 2011) and illustrates a trend of reducing the latter to the *selective* primary care model (Keleher, 2001). This shift from healthcare to care illustrates a complete reversal of the situation motivating Alma-Ata, where the ecological perspective was dominant over the biomedical paradigm (Green, Richard, & Potvin, 1996).

Two important limitations have to be mentioned with regards to this paper. First, the historical shift we retraced leading to a biomedical conception of CHWs has neither been uniform or simultaneous in all LMICs. In some cases, this shift never took place because CHWs acted from the outset as front-line clinicians. In some wealthier Latin American countries committed to universal health and social programs, we have observed the opposite – comprehensive PHC has remained more popular than selective interventions (Labonté et al., 2008). Also, the distinction between the two conceptualizations of CHWs is not as clear-cut as we may have presented it. On the one hand, we contend that it is inappropriate for a CHW to act as a clinician without being established as an agent of health promotion; on the other hand, administering medication reinforces his/her credibility and effectiveness to promote health in the community (Bhattacharyya et al., 2001; Standing & Chowdhury, 2008). In addition to the difficulty of clearly distinguishing between these two conceptualizations, their complementarity

should also be acknowledged. As a position paper, this article inevitably encounters such limits to generalizability. Nevertheless, our analysis reveals a gradual erosion of the concept of CHWs as actors of social change, notably in international health policies.

Second, while we associate this departure with the surge of neoliberal ideology in the last decades, several other factors have undeniably participated in the process. We certainly do not want to reduce the complex historical evolution of CHWs use to a single factor. However, the universal nature of this decline and its acceleration during the collapse of the socialist bloc support our argument: the structure of the international system and the predominant ideology seem to have played a non-negligible influence in this evolution. The WHO's permeability to neoliberalism is known to influence its recommendations (Navarro, 2008). By medicalizing lay actors such as CHWs, community case management of malaria accentuates a disengagement of the state in African countries, to the detriment of social justice.

### Conclusion

On the wave of the Commission on Social Determinants of Health's recommendation to realign policies and systems on health promotion principles, the WHO commits itself to restoring the PHC approach in LMICs. Defined by Alma-Ata upon a positive definition of health, this approach calls for envisioning CHWs as health promoters, and not only as specialists treating diseases. However, community case management of malaria has still not met this challenge. On the contrary, it has intensified the current tendency to medicalize and specialize CHWs.

To reconcile PHC and the fight against malaria, we argue that the community management of malaria should be disentangled from this biomedical paradigm and cease to focus on case management. Reintroducing a health promotion perspective in this strategy necessitates planning interventions that are preventive, integrated, adapted to the local context and that promote the empowerment of the population. CHWs' qualities represent strong assets to support such interventions (Okeibunor et al., 2011), and malariology should explore this avenue more seriously. As Ndoye (2009) summarizes, 'Management cannot be reduced to a high medicalization since the fight against malaria is not only a question of therapists and drugs.' Thirty-five years after Alma-Ata, CHWs potential to reduce health inequalities by acting on the social determinants of health is far from achieved.

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