Recognising the Pitfalls of the Past: Community Health Workers in the time of COVID-19

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ABSTRACT
Since their formal inception in the 1960s, Community Health Worker (CHW) programs have been revered as a panacea by some and critiqued as a delusion by others (R. N. Labonte et al., 2017; R. Labonte & Saunders, 2015). CHW programs can yield up to a 10:1 return on investment, mobilising communities to take preventative actions to tackle some of the most overwhelming diseases of our time (Earth Institute at Columbia University, 2013; WHO, 2015). However, when carried out without appropriate support or integration into broader health systems, CHW programs cease to be comprehensive tools for resilient preventative health and, instead, become structures that exploit CHWs, leaving them distressed and disillusioned within roles they are unequipped to fill and so fail to meet the needs of the communities they serve (Campbell et al., 2008; R. N. Labonte et al., 2017; Rifkin, 1996). The vital role CHWs are playing in the global COVID-19 pandemic requires us to highlight the failings of such scale-ups in the past and the key lessons we can take from this history.

CHWs: THEIR HISTORY AND LESSONS LEARNT FROM HIV/AIDS
CHWs – also referred to as lay health workers – are chosen from within the community to respond to health challenges from the community level up. The specific demographic makeup of CHWs is hard to define due to contextual variation, but it is clear that they are overwhelmingly female (Peter & Davies, 2020). Though CHWs typically have minimal formal training, they possess a deep understanding of culture, language, and context in which they operate. CHWs’ most basic role is to improve the coverage of first-contact care. Based on contextual needs, programs can include food and medicine distribution, pre-/post-natal home visits, testing and contact tracing, and community education. A more comprehensive understanding of their role includes their ability to address broader social and environmental determinants of health through advocacy. This includes engaging communities in dialogue and action around how to address social, political and structural impediments to their wellbeing (Global Health Watch Staff, 2014).

The history of CHWs plays an important role in our understanding of current programs. The first formal programs were established in the 1960s and 70s, primarily in Latin America and China in the form of their ‘Barefoot Doctors’ program (Global Health Watch Staff.). During this period, there was a crisis regarding the perception of vertical health programs due to their failure to tackle malaria in the 1960s (Cueto, 2004). Informed by experiences in Latin America and China, the global health community began to explore the value of CHWs. This resulted in the development of CHW programs in the 1970s across various parts of Africa, Asia and Latin America (Ballard et al., 2018).

The increased presence of community approaches to health culminated in the 1978 International Conference on Primary Health Care at Alma Ata which centred on the importance of comprehensive primary health care as its guiding principle (Labonte et al., 2017; WHO, 1978). The resulting declaration, signed by 134 countries, aimed to put people at the centre of health systems with CHWs playing a key role in this effort. This shift in focus to CHWs stemmed from the consensus that poor health outcomes were inextricably linked to inequity, a weak focus on preventive health, and a lack of community participation. Strong CHW structures had the possibility of reaching and empowering marginalised populations, including those in often-overlooked rural contexts. In later years, CHWs were also seen as a pragmatic, low-cost response to the growing shortage of Health Workers (HWs) (Ballard et al., 2018). The escalating weight placed on these two approaches to CHWs shifted continually over the subsequent decades.

Throughout the 1980s, there was a rapid scale-up of CHW programs. Analyses of many of these programs show that large-scale interventions were less effective than the smaller, community-based programs they replaced (Gilson et al., 1989; Walt et al., 1990). These results were partly driven by the perception of CHWs as a quickly scalable and cheap labour force to plug existing gaps in the health system, rather than as a route to strengthening health services at the base. As a result, CHWs were not given sufficient training, supervision, and medical support. These issues were exacerbated by cuts to health funding caused by the 1970s oil crisis that left many countries in debt (Standing & Chowdhury, 2008). This was compounded by the imposition of structural adjustment programs on developing countries which further reduced public service funding (Brunelli, 2007). These combined crises rendered CHW programs as poorly resourced stand-ins and the development community’s interest in such programs faded (Ballard et al., 2018).

In the 1990s, the rise of the HIV/AIDS pandemic changed attitudes towards CHWs once more. When the virus took hold in sub-Sahar-
ran Africa, CHW programs were significantly depleted. These gaps in the Health Work Force (HWF) meant that CHWs were one of the cheapest ways to scale-up the HIV response. The 1990s are key to understanding contemporary CHW programs since it is these scaled up structures that are still prevalent today. It is worth dwelling on the implications of this period to derive lessons that influence the scale-up under the current coronavirus conditions.

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The context of a depleted HWF was a key driver in revitalizing the interest of many Non-Governmental Organisations (NGOs) and governments in CHWs (Campbell et al., 2008). The diminution was exacerbated by the effects of ‘brain drain’ where health professionals were leaving the region to practice in countries with higher salaries. One study reports that, in 2000, about 65,000 African-born physicians and 70,000 African born professional nurses were working in ‘developed’ countries (Clemens & Pettersson, 2008). To take but a single example of the effect this had on the national level, over 80% of Liberian born nurses were working abroad in the same year (Clemens & Pettersson, 2008).

The depleted HWF led to a strong emphasis on ‘task shifting’ from trained nurses and medical professionals to CHWs. Like many elements of CHW implementation, ‘task shifting’ can have polar effects depending on how conscientiously it is carried out. At its core, it involves shifting health-related responsibilities from one cadre to another, a practice that has been in place for decades but gained new urgency during the HIV/AIDS pandemic (Lehmann et al., 2009). This practice held great promise – and in many regards still does – as captured by the strong endorsements it received from agencies such as PEPFAR, USAID, and the WHO (WHO, 2008). When implemented correctly, ‘task shifting’ has shown to be a highly effective and equitable intervention that utilizes and supports the existing HWF to its full potential (Lehmann et al., 2009).

However, ‘task shifting’ has historically failed when implemented without adequate local and national buy-in or long-term funding. Many NGOs approached the HIV/AIDS response with funding restrictions between three to five years. This is not a sufficient financial nor political commitment to build sustainable structures (Lehmann et al., 2009; Moyo, 2009). The majority of literature on ‘task shifting’ argues that any attempt to truly harness its potential as a mechanism to equitably increase access to health requires secure financing for a minimum of twenty years (Lehmann et al., 2009).

A longer-term investment allows for two key processes to maintain programmatic sustainability. Firstly, it allows health systems to shift the roles of the health cadres and appropriately integrate CHWs into the structure through training and supervision. During this process, it is important to be cognizant that redefining the roles of nurses and other HWs may be necessary to incorporate coordination and supervision as part of their responsibilities (Marchal et al., 2005). Secondly, well-grounded task shifting is dependent on successfully generating health teams at the community and primary care level. Without setting up these teams with appropriate linkages to the broader system, task delegation will become fragmented and unsustainable (Lehmann et al., 2009).

In summary, implementing ‘task shifting’ as an entry point into CHW development can be a powerful intervention and an area for investment. But we must be cognizant that it can occur superficially, temporarily patching over an insufficiently staffed WF with an insufficiently supported or exploited CHW structure.

In this light, engaging in CHW structures requires us to focus on empowering the HWs themselves. During the HIV/AIDS-related CHW scale-up, one of the key issues pertained to the treatment of the CHWs themselves. As previously discussed, there was an all too easy tendency to operationalise CHWs and view them as a plug to be moved into place in a leaky system. A review of health volunteer programs – CHW programs without remuneration – in Botswana, Kenya, and Sri Lanka showed that CHWs were primarily used to provide cheap labour to cut down on government spending (Walt et al., 1990). The research went on to capture that this use of CHWs led to negative experiences among the CHWs which impacted their engagement in the wider community they were identified to serve and represent. In projects where CHWs felt exploited, no significant short or long term communal health gains were observed nor was there an increased capacity to respond to future crises (Walt et al., 1990).

The mistreatment of CHWs during HIV/AIDS is more widespread and extends beyond the three aforementioned countries (Campbell et al., 2008). A significant amount of research shows that many CHWs who responded to the HIV/AIDS pandemic experienced negative emotional, financial, and even physical effects (Akintola, 2006; Campbell & Foulis, 2004; Rugalema, 2000). When addressing issues of health and wellbeing, it is both unethical and ineffective to overlook the needs of CHWs themselves since it reduces their wellbeing and their capacity to serve the communities around them.

To this end, it is imperative to consider the active policy and implementation decisions that are needed to empower CHWs. Although research on how to best support CHWs is limited, available research and expert insights provide an astute course of action (Campbell et al., 2008). Based on these studies, CHWs should be: offered remunerations for their labour, provided with appropriate training and supervision, and given room for professional advancement if desired (Ballard et al., 2018; Rifkin, 1996; WHO, 2008).

The crucial lesson of the HIV/AIDS pandemic is two-fold. The aim is to (a) provide comprehensive support to CHWs while (b) ensuring that they are given the space and structure to participate more widely within their community and respond to an array of social, environmental, and political factors that influence health and wellbeing. Over two decades ago, there was strong criticism of the rapid expansion of CHW programs during the HIV/AIDS pandemic for its tendency to mistreat volunteers and the failure to facilitate any form of wider empowerment outside of the bounds of direct
HIV/AIDS service provision (Rifkin, 1996). In a time where the COVID-19 response is leaning heavily on CHWs, it is imperative that we are conscious of these past errors as we balance the immediacy of crisis with the need for sustainable, ethical, and comprehensive programs.

**COST EFFECTIVENESS AND FINANCING OF CHWs**

Despite the continual relevance of CHWs, studies focusing on their cost effectiveness are limited (Walker & Jan, 2005). This is primarily because there are significant methodological obstacles to carrying out such research. CHW programs are rarely standardised, making variable identification a challenge. Additionally, many of the benefits of such programs are their effects on a wide range of community strengthening factors beyond a single health intervention. This diffuse impact is a challenge to measure, The majority of available cost effectiveness analyses (CEA) focuses on specific CHW interventions such as medicine delivery, pre/post-natal home visits, or educational campaigns. This leaves out many of the secondary effects and costs which can be more significant than the single intervention or expenditure (Perry & Zulliger, 2012). Nonetheless, this section aims to outline what is known about the cost effectiveness of CHWs, assert a case for increasing funding for such programs, and provide an overview of key strategies to achieve these financing priorities.

A largescale study on CHW costing assessed that CHWs have a positive return on investment of up to 10:1 when accounting for healthier populations (Earth Institute at Columbia University, 2013; WHO, 2015). This assessment was based on the calculation that the investment needed to scale-up approximately one million CHWs in Sub-Saharan Africa would be USD $3.1 billion per annum. For this investment, the study calculated the benefit in three domains. Firstly, they argued that the purely economic benefit from the gains in productivity due to the increased national health could be as much as $19.4 billion USD per year. Secondly, they assessed that such a scale-up would contribute to a more rapid containment of future health crises that could save an additional $750 million USD yearly. Finally, they calculated that there would be a significant multiplier effect from the increase in formal employment for CHWs, resulting in economic activity that could produce an additional $1.6 billion USD per year. At full scale, this combination of factors yields an estimated minimum yearly return on investment of $21.7 billion USD per annum (Earth Institute at Columbia University, 2013; WHO, 2015).

All this said, it is still necessary to repeat the caveat on these impressive claims. CHW programs are notoriously difficult to measure and standardise, so the Earth Institute calculations rely on assumptions that frequently may not be met. Even so, these numbers highlight that further investment in CHWs is warranted despite concerns with the outcomes of – often poorly conducted – individual programs (Falisse & Ntakarutimana, 2020; Perry & Zulliger, 2012).

More granular evidence also indicates that CHWs are worth further investment. A CEA of CHW programs in Ethiopia, Kenya, and Indonesia used probabilistic sensitivity analysis and showed that there was over 80% chance that each program was cost-effective (McPake et al., 2015). The authors qualified that CHWs were most likely to be cost-effective when integrated into the overall health system and when based primarily in rural populations. Additionally, an analysis using the Lives Saved Tool (LiST) in 2017 to assess the effect of a global CHW scaled up intervention on child and maternal mortality concluded that it could prevent up to 6.9 (sensitivity bounds 3.7-8.7) million deaths in the four year period between 2016 and 2020 (Chou et al., 2017). An additional study does the work of assessing the role of CHWs as a tool for equity (Carrera et al., 2012). They took a modelling approach to analyse the effects of CHW scale up on child survival, health, and nutrition and concluded that comprehensive CHW programs lead to greater equity in access to health resources. This emphasis on equity is shown to have a higher cost-effectiveness than mainstream approaches (Carrera et al., 2012). These studies are nowhere near exhaustive and many other CHW analyses reveal cost-effectiveness for specific vertical interventions in specific contexts when carried out appropriately (Perry, 2020; Vaughan et al., 2015).

After making the case for the cost-effectiveness of CHWs – when implemented comprehensively, in line with broader health systems, and with adequate support for workers – it is then necessary to discuss the practices and complexities of sustainable financing. The One Million Community Health Workers campaign estimated an annual cost of $3.1 billion USD for effective implementation of CHWs in Sub-Saharan Africa (Earth Institute at Columbia University, 2013). However, this estimate only accounts for training costs, salaries, supplies, management, and overhead. It does not factor in additional infrastructural needs that are relevant to adequately support CHWs in the field (WHO, 2015). This is a large sum that, at least at this stage, is a challenge to fund exclusively by domestic governments, particularly those located in the global South.

As a result, CHW programs traditionally rely on a combination of domestic and international financing. The ideal is to maximise the capacity for domestic funding since this allows for a level of self-determination and sustainability that is hard to come by when reliant on international support. In Pakistan, between 1995 and 2003, the government funded 89% of the Lady Health Worker program and only 11% of costs were covered by international bodies (Criger et al., 2013). However, such a funding balance is still relatively rare in Sub-Saharan Africa. Rwanda, for instance, has one of the more established CHW programs on the continent yet, as of 2012, international funding comprised 82% of CHW spending (WHO, 2015).

Continued international investment in CHW programs is still necessary to ensure they are appropriately resourced. But it is equally necessary to explore new modalities for financial independence in order to ensure more sustainable and robust national health structures. Several possibilities have been proposed to include other stakeholders in the cost sharing process. These options range from having CHWs sell subsidised health products to cover a portion of their salary, to public-private partnerships where local businesses are incentivised to invest in CHW programs, to human capital bonds that finance short-term costs that are paid back over extended periods (WHO, 2015). Despite the WHO endorsing these strategies, each of these possibilities have received well-founded criticism from civil society organisations in the global south (R. N. Labonte et al., 2017; Loewenson et al., 2019). Such funding models...
have the potential to significantly undermine the push for comprehensive primary healthcare by shifting the burden onto patients, introducing business interests that approach CHW programs with their own agendas, and forcing CHW programs to comply with narrow performance indicators in order to meet loan requirements (Ballard et al., 2018; Brunelli, 2007; Campbell et al., 2008; R. N. Labonte et al., 2017).

Many of these more unilateral funding methodologies require further research in their application for the specific and fragile context of CHW investment. Inevitably, different stakeholders carry their own agendas and have the potential to operationalise CHW programs to their own ends. Over the past half-century, the global health community has developed a better understanding of what constitutes an effective, comprehensive CHW structure. There is a need for both research and policy that explores not only the type of funding that is most suited to an increased emphasis on CHW programs, but also the bounds that need to be in place to ensure that the comprehensive nature of the programs themselves are not compromised.

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\textbf{CHWs AND COVID-19: A MOMENT FOR EXPANSION, A MOMENT FOR PROTECTION}

As was the case with the HIV/AIDS pandemic, COVID-19 has inspired a renewed interest in CHWs. The place for CHWs in this pandemic is clear. They are responding in a highly cost-effective manner and governments are using established CHW structures for expansive COVID-19 testing, education, and contact tracing (Ballard et al., 2020; Cotterill, 2020; Croke, 2020).

Ballard et al. (2020), the founder of the Community Health Impact Coalition (CHIC), outlines three key areas of CHW focus during the coronavirus pandemic. First, CHWs contribute to the process of interrupting the spread of the virus. This occurs through comprehensive engagement within the health system to test, trace, and educate communities. Secondly, they have a role in maintaining essential health services as the disease burden surges. This is particularly relevant since COVID-19 has exacerbated a sydemic that overlays the virus with non-communicable diseases (NCDs), each increasing the vulnerability to the other. The vulnerability of biological and social factors is compounded by significant disruptions to supply chains of essential medicines caused by the pandemic (Yadav et al., 2020). As we encounter these challenges, CHWs have the capacity to respond from the community level up, ameliorating various social determinants that would otherwise increase the vulnerability of the already vulnerable. However, this still requires that governments take explicit steps to maintain and – where necessary – restore distribution channels that support CHWs. Thirdly, and relatedly, governments can utilize CHW networks to access rural and frequently marginalised populations in order to provide care. In the same vein, CHWs can target appropriate cash injections to where they are most needed on the local level (Ballard et al., 2020).

The protection of the HWs themselves during the pandemic must be an overarching consideration to ensure both ethical and effective programs. Most explicitly, this involves ensuring that CHWs have access to necessary PPE to maintain their own safety (Ballard et al., 2020). However, the term “protection” must also extend into their psychosocial wellbeing as well (Deng & Naslund, 2020; Fernandez & Lotta, 2020; Lotta et al., 2020).

The risk of slipping into the pitfalls of emphasising scale and a cheap labour force, as was done during the onset of HIV/AIDS, is still great. The WHOs Health Workforce Estimator Tool is a recent example of the continued tendency to overlook CHW protection (WHO, 2020). The tool was designed to assess the HWF needs for various cadres in order to guide countries on emergency hiring procedures and PPE procurement. The initial version of the tool did not include assessments for CHW needs, operationally excluding them from PPE provision. The implications of this are concerning: vast numbers of CHWs engaging in the frontline of the virus response without being supplied with appropriate equipment to maintain their own safety. This is not an unusual error since factoring in CHW needs in such formulas is a daunting task for the same reasons that calculating the CEA is a challenge: the disparate structures and needs of CHW programs make formulaic assessment near impossible to standardise. But the resolution can never be exclusion. Fortunately, this omission was corrected. Nonetheless, it should call to our attention that including CHW needs in a period of such urgency requires active thought and action.

With regards to psychosocial distress, the effects on CHWs are even more concerning (Fernandez & Lotta, 2020; Lotta et al., 2020). An analysis of CHWs in Brazil showed that they are feel ill-equipped and fearful in the face of the pandemic. The primary causes for their fear are the lack of PPE and supervisory guidance. The absence of support has been a recurring issue since the COVID-19 pandemic began, leading to a distressed workforce and inadequate service provision to the communities they serve. As was the case during the HIV/AIDS pandemic, CHWs are not being sustained within a long-term comprehensive primary health care structure (Deng & Naslund, 2020). We know from the past that such a context is likely to yield poor outcomes in both the short- and long-term (Walt et al., 1990). For this reason, among many others, it is vital that we reflect on the protection, sustainability, and empowerment of CHWs even as we respond to the immediacy of the COVID-19 pandemic.

\textbf{CONCLUSION}

CHWs have a clear and fundamental role to play in response to
COVID-19. They can catch and respond to outbreaks before they spread; offer care to areas that are otherwise overlooked; increase equity in health outcomes; contribute to structures of preventative health that make communities more resilient to future crisis; and lead to significant long-term economic gain. The onset of the HIV/AIDS pandemic over three decades ago revealed the harm that can be caused when operationalising CHWs as cheap, and often expendable, labour to plug a weak health system. Poor planning and an underestimation of the resources and restructuring required to implement them appropriately, damages the efficacy of CHWs. As CHWs become more relevant in health response, it is vital that we engage nationally and globally in more comprehensive ways of approaching both funding and implementation. If we take the COVID-19 pandemic – with a renewed interest in CHW programs – to think past the urgency of the crisis, we may be able to construct a more comprehensive health system that is inclusive of CHWs and attuned to their needs.

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ic in Brazil: Personal Feelings, Access to Resources and Working Process


