

In the Era of Declining Donor Financing, can Domestic Resources Sustain Civil Society Organizations' Efforts to end New-born HIV Infections?

Jonathan Cali¹, Altea Cico¹, Aida Yemaneberhan², Ugochukwu 'Ugo' Amanyeiwe³, B. Ryan Phelps³, Meena Srivastava³, Alexandra Vrazo³, Josef Tayag³, Carlos Avila^{1*}.

¹Abt Associates

²Elizabeth Glaser Pediatric AIDS Foundation, John Snow Inc

³United States Agency for International Development (USAID)

*Corresponding Author: Carlos_Avila@abtassoc.com

Abstract

Efforts to increase uptake of prevention of mother-to-child transmission of HIV (PMTCT) services has produced a historic reduction in transmission rates to infants, but a significantly larger investment will be needed to end the HIV/AIDS epidemic by 2030. Civil society organizations (CSOs), which have traditionally been funded by international donors, have made important contributions to reducing new infections in children, largely due to their close links to local communities, understanding of the barriers to accessing HIV services, and ability to reach vulnerable populations. CSOs are effective at delivering and supporting PMTCT services, but there is little evidence demonstrating that they are cost-effective—that they avert more child infections and connect more women to treatment per dollar invested than other modalities. As international donors reduce their support to low and middle income countries (LMIC), it is imperative for governments to incorporate CSOs into their health systems—lest CSOs risk not having funding to provide crucial services. LMIC governments should study the cost-effectiveness of CSOs for delivery and support to PMTCT services to determine how partnering with them can provide the most value for money. For models that are effective, LMIC governments should consider initiating performance-based contracts with CSOs and giving grants to domestic community-based organizations to supplement the impact of public health services. International donors should facilitate these activities by building the capacity of LMIC governments and CSOs to enter into formal partnerships. Delaying investment in CSOs will deprive LMICs of their most effective, and potentially cost-effective, resources for ending the HIV/AIDS epidemic.

Keywords: PMTCT, HIV, Civil Society, Health Financing, Partnerships.

Introduction

The Sustainable Development Goal on health sets the ambitious target of ending the HIV/AIDS epidemic by 2030 [1]. To help achieve this goal, UNAIDS has committed to eliminate new HIV infections among newborns by 2020 [2]. Efforts to increase uptake of prevention of mother-to-child transmission of HIV (PMTCT) services has led to historic reductions in new infections among children and put hundreds of thousands of mothers on treatment. Between 2000 and 2015, the number of children being infected with HIV fell by 70%, and 85 countries now see fewer than 50 children acquiring HIV each year [3, 4]. In Sub-Saharan Africa alone, the number of children newly infected with HIV fell by 47% between 2009 and 2014 [5].

Civil society organizations (CSOs), including non-governmental, faith-based, and community organizations, have played a major role in this success [6]. With significant financial and technical support from international donors, CSOs have successfully engaged in advocacy, generated demand for HIV services, delivered treatment, supported treatment adherence, and provided psychosocial support [7]. Despite these efforts, PMTCT programs need to be scaled-up to meet global commitments: there were 150,000 new infections among children in 2015 alone [8]. Ending the HIV/AIDS epidemic will require massive new investments, including increasing funding for prevention programs such as PMTCT from US\$4.5 billion per year in 2016 to US\$7.3 billion in 2020 [9].

Low and middle-income countries (LMIC) are at a crossroads regarding the role of CSOs in the HIV/AIDS response. Rather than increasing investments, donors have been maintaining or reducing support to both governments and CSOs engaged in the response to HIV/AIDS [8]. Without new sources of domestic financing, CSOs will have difficulty continuing to deliver HIV services. As donor financing declines, it is ever more critical for governments to ensure limited resources are allocated efficiently to maximize impact.

LMIC governments must decide if incorporating CSOs into their national health systems is the most cost-effective way to sustain and scale-up activities for preventing and treating HIV/AIDS. Now is the time to explore options for contracting or partnering with CSOs to provide PMTCT services which could deliver the best return on investment for domestic HIV/AIDS funding. Donors can facilitate the transition to domestic financing of CSOs by increasing technical assistance for studying their

cost-effectiveness and strengthening the capacity of CSOs and the public sector to develop formal partnerships.

An unprecedented improvement in coverage of PMTCT services, but further gains needed

In many LMICs, low capacity of public health systems, especially their limited ability to reach marginalized and geographically-isolated communities, is hindering the scale-up of PMTCT [7]. CSOs provide crucial support for delivering PMTCT services, but face questions of sustainability. The "Global Plan towards the Elimination of new HIV Infections among Children and Keeping their Mothers Alive," established ambitious targets, but between 2009 and 2014, the 21 prioritized countries reduced new HIV infections among children by only 48%, falling short of the target of a 90% reduction. The number of AIDS-related deaths among women declined by 45% in those 21 countries, missing the target of 50% [8]. Furthermore, the mother-to-child transmission (MTCT) rate was reduced by half between 2009 and 2014 to 14%, but is still higher than the target of 5% [8]. Attaining bold targets will only become more challenging with the anticipated decline of donor funds.

Global HIV funding is stagnating and HIV programs need to do more with less

Donor support for HIV/AIDS programs is declining and will likely impact the operations of CSOs and LMIC governments, which are bearing more of the burden for financing their HIV/AIDS response. Total donor spending for HIV declined from \$8.62 billion to \$7.53 billion (a 13% decline) between 2014 and 2015, and all 14 bilateral donor governments assessed had reduced their expenditure [10]. This trend of stagnating international funding is likely to continue. The United States, the largest international donor for HIV, reduced its funding allocated to the global HIV/AIDS response by \$2.7 million from 2015 to 2016 and requested \$7.2 million less for 2017 [11]. Global Fund disbursements for HIV/AIDS increased only from US\$17.01 to US\$17.13 billion from 2016 to 2017 [12]. Meanwhile, African countries have increased expenditure on HIV/AIDS by 150% in the past four years, and will need to make difficult choices on how to spend new domestic resources [13-15]. Investment decisions should be guided by cost-effectiveness, and CSOs should be examined as potential mechanisms for preventing new child infections.

Global Data Suggests that CSOs are Effective; but Evidence on Cost-Effectiveness is Lacking.

CSOs have advantages for meeting the needs of

people living with HIV as they have close links to communities, giving them a good understanding of social and cultural barriers to adopting preventative measures and adhering to treatment, and influence for shaping cultural norms [16]. CSOs can provide services to marginalized groups, such as drug users and sex workers, which are sometimes challenging for the public sector to reach due to legal or political concerns. CSOs are often small and less bureaucratic than the public sector, giving them flexibility to try new approaches and adaptability to meet new challenges. Their close links to the community creates environments where people living with HIV are less likely to encounter stigma [17-18].

CSOs' advantages for preventing and treating new infections are applicable to PMTCT. Community-level interventions often carried out by CSOs, including strengthening linkages to care, facilitate the uptake of PMTCT services [10]. CSO involvement in PMTCT service provision in Uganda increased the capacity for delivering PMTCT services, with CSOs increasing the number of women tested from 225 to 5,867 between 2004 and 2005 in 13 PMTCT sites [20]. In Lesotho, the involvement of CSOs in improving referrals for PMTCT services resulted in improved access, demand and uptake of those services. Phelisanang Bophelong, a civil society organization, trained community leaders, facilitated public education sessions, and successfully referred 91 women to PMTCT services from October 2013 to September 2014, significantly surpassing its target of 40 [21]. Evidence also shows that CSOs can be an effective complement to public health systems. In Ghana, partnership contracts between government and CSOs for HIV service delivery have resulted in the delivery of more comprehensive and cost-effective services [22].

Several studies suggest that CSOs can be at least as effective as the public sector in providing PMTCT services. Behets et al. found that in the Democratic Republic of Congo 94.1% of pregnant women seeking antenatal care were tested for HIV in clinics managed by CSOs compared to 84.4% in public facilities. A higher percentage of HIV-positive women and infants seeking care in CSOs received ART compared to those in public facilities [23]. Ladner et al. assessed 64 PMTCT programs in 25 sub-Saharan African countries and found that 84.2% of pregnant women seeking antenatal care in facilities managed by CSOs were tested for HIV, compared to 67.2% of women seeking care in public facilities [24].

While there is substantial evidence that CSOs are effective for PMTCT, evidence on whether they are worth the financial investment is less clear. The costs of providing PMTCT services in the public sector are

well-documented, but there are few published studies comparing the costs of public provision of PMTCT services to PMTCT services provided by CSOs. Evidence from other health areas suggests that CSOs provide some health services at a lower cost than the public sector, but others at a higher cost [25].

Researchers have conducted numerous cost-effectiveness analyses of PMTCT programs, but many only compare different PMTCT regimens: Option A, Option B, and Option B+ [26-27]. We did not find cost-effectiveness analyses comparing the delivery of PMTCT services in facilities managed by CSOs to services delivered in the public sector. There are also few economic analyses that study CSO support to public facilities and compare them to facilities that do not receive such support. One such study found that "mentor mothers" providing education and psychosocial support to HIV-positive pregnant women and mothers increased retention in care and uptake of early infant diagnosis, and produced US\$11.40 in savings from averted treatment costs for every US\$1 invested [24]. However, additional research on the cost-effectiveness for engaging CSOs to deliver PMTCT services and partnering with CSOs to support public provision of services would arm LMIC governments with the information needed to determine if and how investing in CSOs can deliver value for money in the effort to end the HIV/AIDS epidemic, while also providing CSOs the resources they need to sustain crucial activities.

A Way Forward for LMIC Governments and Donors for Investing in CSOs for PMTCT

Given the impending risk to the financial sustainability of CSOs currently supported by international donors and the need for governments to receive maximum return on their investments, there are several steps that LMIC governments and international donors should take to maintain and build upon the contributions of CSOs to PMTCT.

1. Assess Cost-Effectiveness of Contracting and Partnering with CSOs to Guide Government Policy

CSOs are effective at scaling up and supporting PMTCT services and have advantages over other sectors for reaching marginalized communities and encouraging adherence to treatment. Producing evidence on the cost-effectiveness of CSOs can guide LMIC governments' decisions on whether they should invest domestic resources to sustain CSOs' activities for PMTCT. Additional studies can also inform governments which types of mechanisms are most cost-effective for engaging with CSOs, and

which roles performed by CSOs provide the most value for money.

2. Develop Partnerships with CSOs to Increase ANC and PNC Visits and Retention in Care

Governments can provide grants to community-based CSOs to generate demand for public services and encourage adherence to treatment. In this way, CSOs can increase the effectiveness of existing government services rather than replacing or supplementing them. For example, internationally-funded CSOs in Lesotho use peer groups, community events, outreach campaigns, and community health workers to encourage pregnant women and new mothers to visit public health facilities for testing and treatment, and to track down women and infants who missed their appointments and refer them back to care. Domestic grants from LMICs can sustain these programs as donors reduce their investments.

3. Consider Contracting CSOs to Provide PMTCT Services

Performance-based contracts tie a portion of payments to the achievement of measurable targets. Where LMIC governments have limited capacity to expand access to services through the public health system, they can use contracts to incentivize CSOs to perform specific functions, and to coordinate different CSOs to work together and provide complimentary services. Contracts are legally binding and enforceable, provide strong incentives for meeting performance targets, and allow funds to be tracked closely [28]. Governments and donor agencies can expand financial and physical access to PMTCT by entering into service delivery contracts with CSOs that provide incentives for retaining women and infants along the PMTCT cascade. They can also increase quality by linking terms of the contract to quality-related indicators.

Governments considering contracting, however, should proceed carefully. Successful contracting requires a pool of CSOs with the capacity to deliver the desired service and the legal and financial mechanisms to sign contracts and bill for services. Contracting also requires the government to develop clearly defined targets, dedicate effort to contract negotiation, collect high-quality data, and invest resources to monitor performance [29].

4. Provide Technical Assistance to Governments and CSOs to Build Contract Management Capacity

International donors have funded CSOs for decades to deliver health services. As donors reduce their

investments, they should focus on building the capacity of LMIC governments to initiate and monitor contracts with CSOs and the capacity of CSOs to execute contracts. Support for governments can focus on defining contract objectives and indicators for measuring quality, designing information systems for monitoring implementation, running competitive bidding processes, and managing contracts [30]. Many CSOs would benefit from capacity building for financial management and contract compliance.

Conclusion

Global efforts to combat the HIV/AIDS epidemic have made incredible progress, especially in reducing the number of child infections. A massive investment is needed to end the epidemic, but new resources are unlikely to come from international donors. It is an urgent priority for LMIC governments to study the cost-effectiveness of CSOs for delivery and support to PMTCT services, initiate performance-based contracts with CSOs, and give more domestic grants to community-based organizations that amplify the impact of the public health system, and for donors facilitate these activities with capacity-building. LMIC governments that hesitate to invest in the CSOs providing vital services in their countries risk losing the most effective foot soldiers in the fight against HIV, and letting the opportunity to end the epidemic slip away.

Contribution of Authors

JC and AC drafted the manuscript, and AY, UA, BRP, MS, AV, JT, and CA revised it critically. All authors read and approved the final manuscript.

Competing Interest

The authors declare that they have no conflict of interest.

Funding

USAID provided funding for this work; however, the views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of USAID.

Acknowledgement

None.

References

- [1] The United Nations. Sustainable Development Goals: Goal 3 Targets [Internet]. The United Nations; [cited 2017 Mar 21]. Available from: <http://www.un.org/sustainabledevelopment/health/>
- [2] Joint United Nations Programme on HIV/AIDS. Fast-Track Commitments to End AIDS by 2030

- [Internet]. Geneva: Joint United Nations Programme on HIV/AIDS; 2016 [cited 2017 Mar 21]. Available from: http://www.unaids.org/sites/default/files/media_asset/fast-track-commitments_en.pdf
- [3] Joint United Nations Programme on HIV/AIDS. Children and HIV: Factsheet. Geneva: Joint United Nations Programme on HIV/AIDS; 2016 [cited 2017 Mar 21]. Available from http://www.unaids.org/sites/default/files/media_asset/FactSheet_Children_en.pdf.
- [4] Joint United Nations Programme on HIV/AIDS. On the Fast-Track to end AIDS [Internet]. Geneva: Joint United Nations Programme on HIV/AIDS; 2016 [cited 2017 Mar 21]. Available from: http://www.unaids.org/sites/default/files/media_asset/20151027_UNAIDS_PCB37_15_18_EN_rev1.pdf
- [5] Joint United Nations Programme on HIV/AIDS. How AIDS Changed Everything – MDG6: 15 Years, 15 Lessons of Hope from the AIDS Response. Geneva: Joint United Nations Programme on HIV/AIDS; 2015 [cited 2017 July 28]. Available from: http://www.unaids.org/sites/default/files/media_asset/MDG6Report_en.pdf.
- [6] Beck EJ, Fasawe O, Ongpin P, Ghys P, Avilla C, De Lay P. Costs and cost–effectiveness of HIV community services: quantity and quality of studies published 1986–2011. Expert review of pharmacoeconomics & outcomes research. 2013;13(3):293-311.
- [7] Fortier E, Matsha N, Matthews M. An evolving partnership: the global fund and civil society in the fight against AIDS, Tuberculosis and Malaria: Global fund to fight AIDS, tuberculosis and malaria; 2007. [cited 2017 Mar 21]. Available from: <http://www.ft.dk/samling/20061/almdel/uru/bilag/198/383297.pdf>
- [8] Joint United Nations Programme on HIV/AIDS. 2015 Progress report on the Global Plan Towards the Elimination of New HIV Infections Among Children by 2015 and Keeping Their Mothers Alive [Internet]. Geneva: Joint United Nations Programme on HIV/AIDS; 2015 [cited 2017 Mar 21]. Available from: http://www.unaids.org/en/resources/documents/2015/JC2774_2015ProgressReport_GlobalPlan
- [9] Joint United Nations Programme on HIV/AIDS. Fast-Track Update On Investments Needed in the Aids Response [Internet]. Geneva: Joint United Nations Programme on HIV/AIDS; 2016 [cited 2017 Mar 21]. Available from: http://www.unaids.org/en/resources/documents/2016/unaid_fast-track_update_investments_needed
- [10] Kates J, Wexler A, Lief E. Financing the Response to AIDS in Low-and Middle-Income Countries: International Assistance from Donor Governments in 2015 [Internet]. Henry J. Kaiser Family Foundation; 2016 Jul [cited 2017 Mar 21]. Available from: <http://files.kff.org/attachment/Financing-the-Response-to-HIV-in-Low-and-Middle-Income-Countries-International-Assistance-from-Donor-Governments-in-2015>
- [11] Kaiser Family Foundation. U.S. Federal Funding for HIV/AIDS: Trends Over Time [Internet]. Kaiser Family Foundation; 2016 [cited 2017 Mar 21]. Available from: <http://kff.org/global-health-policy/fact-sheet/u-s-federal-funding-for-hivaids-trends-over-time/>
- [12] The Global Fund. Financials [Internet]. The Global Fund; 2016 Oct [cited 2017 Mar 21]. Available from: <https://www.theglobalfund.org/en/financials/>
- [13] Avila C, Loncar D, Amico P, De Lay P. Determinants of government HIV/AIDS financing: a 10-year trend analysis from 125 low- and middle-income countries. BMC Public Health 2013, 13:673 doi:10.1186/1471-2458-13-673.
- [14] Katz I, Routh S, Bitran R, Hulme A, Avila C. Where will the money come from?: assessing alternatives to HIV donor funding BMC Public Health 2014.
- [15] The Global Fund. Domestic Financing [Internet]. The Global Fund; [cited 2017 Mar 21]. Available from: <http://www.theglobalfund.org/en/domestic-financing/>
- [16] Basu S, Andrews J, Kishore S, Panjabi R, Stuckler D. Comparative performance of private and public healthcare systems in low-and middle-income countries: a systematic review. PLoS med. 2012 Jun 19; 9(6):e1001244.
- [17] Cornman H, Grimm C, Rana S. Engaging local non-governmental organizations (NGOs) in the response to HIV. AIDS. Anthropology Scholarship [Internet]. Paper 2. 2005 [cited 2017 Mar 21]. Available from: http://scholars.unh.edu/anth_facpub/2/
- [18] Barnette C, Connor C, Putney P. Contracting with Non-governmental Organizations to Combat HIV/AIDS [Internet]. Special Initiative Report No. 33. Bethesda, MD: Partnerships for Health Reform Project, Abt Associates Inc.; 2001 [cited 2017 Mar 21]. Available from: <http://www.abtassociates.com/reports/sir33fin.pdf>
- [19] Busza J, Walker D, Hairston A, Gable A, Pitter C, Lee S, Katirayi L, Simiyu R, Mpfu D. Community-based approaches for prevention of mother to child transmission in resource-poor settings: a social ecological review. Journal of the International AIDS Society. 2012 Nov 7;15(4).
- [20] Shillingi L, Kironde S, Magumba G, Nakibirige M, Lalobo C, et al. Harnessing civil society scale-up HIV/AIDS interventions: experiences

- from Uganda [Internet]. Presentation at the Annual Scientific Conference of Makerere University Medical School and IPH. John Snow International Research and Training Institute, Inc.; 2006 [cited 2017 Mar 21]. Available from: http://uphold.jsi.com/Docs/Resources/Conferences/harness_cso_hct_interventions.pdf
- [21] Building Local Capacity Project. Case Study: Improving uptake of PMTCT services in Lesotho: an effective community mobilization approach [Internet]. 2015 [cited 2017 Mar 21]. Available from: <http://www.hivsharespace.net/system/files/MSH%20Case%20Study%20Lesotho%20PMTCT%20web.pdf>
- [22] Hushie M, Omenyo CN, van den Berg JJ, Lally MA. State-civil society partnerships for HIV/AIDS treatment and prevention in Ghana: exploring factors associated with successes and challenges. *BMC Health Services Research*. 2016 Aug 2;16:332.
- [23] Behets F, Mutombo GM, Edmonds A, Dulli L, Belting MT, Kapinga M, Pantazis A, Tomlin H, Okitolonda E, PTME Group. Reducing vertical HIV transmission in Kinshasa, Democratic Republic of Congo: trends in HIV prevalence and service delivery. *AIDS care*. 2009 May 1;21(5):583-90.
- [24] Ladner J, Besson MH, Rodrigues M, Saba J, Audureau E. Performance of HIV Prevention of Mother-To-Child Transmission Programs in Sub-Saharan Africa: Longitudinal Assessment of 64 Nevirapine-Based Programs Implemented in 25 Countries, 2000-2011. *PloS one*. 2015 Jun 22;10(6):e0130103.
- [25] Avila C, Cali J, Cico A, Yemaneberhan A. Evaluating Service Delivery Models for Prevention of Mother-to-Child Transmission of HIV: Cost and Effectiveness of Providing PMTCT Services in Public, Private, and Civil Society Organizations [Internet]. Arlington, VA: Strengthening High Impact Interventions for an AIDS-free Generation (AIDSFree) Project; 2016 [cited 2017 Mar 21]. Available from: https://aidsfree.usaid.gov/sites/default/files/2016.03.14_pmtct_service_delivery_models_rpt_tagged.pdf
- [26] Olufunke F, Avila C, Schouten E, Chimbwandira F, Shaffer N, Hoos D, De Lay P. Cost-effectiveness analysis of option B+ for the HIV prevention and treatment of mothers and children in Malawi. *Plos One* March 12, 2013. DOI: 10.1371/journal.pone.0057778.
- [27] Karnon J, Orji N. Option B+ for the prevention of mother-to-child transmission of HIV infection in developing countries: a review of published cost-effectiveness analyses. *Health policy and planning*. 2016 Oct 1;31(8):1133-41.
- [28] Zikusooka, C.M.; Kibuuka-Musoke, D.; Bwanika, J.B.; Akena, D.; Kwesiga, B.; Abewe, C.; Watsemba, A.; and A. Nakitende. External Evaluation of the m2m Mentor Mother Model as implemented under the STAR-EC Program in Uganda [Internet]. Cape Town: Department of Programmes and Technical Support, mothers2mothers; 2014 [cited 2017 Mar 21]. Available from: https://www.m2m.org/wp-content/uploads/2015/01/Uganda_CostBenefitAnalysis.pdf
- [29] Cali J, Cogswell H, Buzwani M, Ohadi E, Avila C. Cost-benefit analysis of outsourcing cleaning services at Mahalapye hospital, Botswana. *Journal of Hospital Administration*. 2015 Dec 9;5(1): p114.
- [30] Benjamin L. Performance-based contracting for health services in developing countries: a toolkit. The World Bank, ISBN. 2008:978-0.