

# The impact of shifts in PEPFAR funding policy on HIV services in Eastern Uganda (2015–21)

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## Abstract

Although donor transitions from HIV programmes are increasingly common in low-and middle-income countries, there are limited analyses of long-term impacts on HIV services. We examined the impact of changes in President's Emergency Plan for AIDS Relief (PEPFAR) funding policy on HIV services in Eastern Uganda between 2015 and 2021. We conducted a qualitative case study of two districts in Eastern Uganda (Luuka and Bulambuli), which were affected by shifts in PEPFAR funding policy. In-depth interviews were conducted with PEPFAR officials at national and sub-national levels ( $n=46$ ) as well as with district health officers ( $n=8$ ). Data were collected between May and November 2017 (Round 1) and February and June 2022 (Round 2). We identified four significant donor policy transition milestones: (1) between 2015 and 2017, site-level support was withdrawn from 241 facilities following the categorization of case study districts as having a 'low HIV burden'. Following the implementation of this policy, participants perceived a decline in the quality of HIV services and more frequent commodity stock-outs. (2) From 2018 to 2020, HIV clinic managers in transitioned districts reported drastic drops in investments in HIV programming, resulting in increased patient attrition, declining viral load suppression rates and increased reports of patient deaths. (3) District officials reported a resumption of site-level PEPFAR support in October 2020 with stringent targets to reverse declines in HIV indicators. However, PEPFAR declared less HIV-specific funding. (4) In December 2021, district health officers reported shifts by PEPFAR of routing aid away from international to local implementing partner organizations. We found that, unlike districts that retained PEPFAR support, the transitioned districts (Luuka and Bulambuli) fell behind the rest of the country in implementing changes to the national HIV treatment guidelines adopted between 2017 and 2020. Our study highlights the heavy dependence on PEPFAR and the need for increasing domestic financial responsibility for the national HIV response.

**Keywords:** PEPFAR, donor transition, health systems, HIV, case study, antiretroviral therapy, development assistance for health

## Introduction

Over the past three decades, development assistance for health (DAH) has enabled low- and middle-income countries to register remarkable public health gains that range from HIV epidemic control to increased immunization coverage and to reductions in maternal mortality (El-Sadr *et al.*, 2012; Serbanescu *et al.*, 2019; Ikilezi *et al.*, 2020). There are several studies suggesting a slowdown or even reductions in DAH, a trend compounded by COVID-19 effects (Brown, 2021; Ogbuoji *et al.*, 2021; Shroff *et al.*, 2022). As such, donor transition in health is gaining increasing importance in global health circles (Amaya *et al.*, 2014; Vogus and Graff, 2015; Burrows *et al.*, 2016). Transition is understood as transferring financial responsibility of funding health programmes from external donors to country ownership (Gotsadze *et al.*, 2019).

Many studies evaluating the impact of donor transition on health outcomes and systems have been conducted within a few months of cessation of the external assistance

(Jakubowski *et al.*, 2017; Serbanescu *et al.*, 2019; Wilhelm *et al.*, 2019; Serbanescu *et al.*, 2017). A previous research on the effects of external donor transition on health programme outcomes has found that post-transition, the quality of health services offered often declines and the scope of health services narrows (Katz *et al.*, 2015; Biradavolu *et al.*, 2017). However, there is a dearth of evidence on the medium- to long-term impacts of cessation of external assistance on health services (Shroff *et al.*, 2022). In addition, many studies examining post-transition impacts have been conducted by programmatic actors (Scheirer and Dearing, 2011). There are few independent evaluations of the long-term impact of loss of donor aid on health programme outcomes (Scheirer and Dearing, 2011; Stirman *et al.*, 2012; Bennett *et al.*, 2015b).

Previous studies have focused on assessing the impact of DAH using predominantly quantitative methods (Snow *et al.*, 2010; Luboga *et al.*, 2016; Pickbourn and Ndikumana, 2019). Qualitative studies are well suited to gather in-depth

knowledge of the long-term impact of loss of donor aid on health programme outcomes and the facilitators and barriers encountered in this process (Stirman *et al.*, 2012; Shroff *et al.*, 2022). Partly due to limited funding for research that takes a long-term lens on the effects of donor transitions in health, long-term impacts are often largely unknown or not sufficiently understood (Scheirer and Dearing, 2011).

There is an emerging body of evidence on donor transition in countries newly attaining middle-income status such as Ghana and Sri Lanka (Banigbe *et al.*, 2019; Bharali *et al.*, 2020; Mao *et al.*, 2021). Several countries are being systematically weaned off DAH on account of their attaining middle-income status (Amaya *et al.*, 2014; Burrows *et al.*, 2016). As more countries prepare for donor transition, such as the Global Fund for AIDS, TB, and Malaria's (GFATM) transition from supporting middle-income countries (Burrows *et al.*, 2016), it is imperative to generate evidence on the effects of donor transitions on health coverage and health systems, particularly in low- and lower-middle-income countries (Shroff *et al.*, 2022).

Although donor transitions from health programmes largely take the form of cessation of funding based on 'time-limited' project timelines (Scheirer and Dearing, 2011) or changing recipient country income classifications (Burrows *et al.*, 2016), increasingly, the character of changes in the donor financing landscape takes on multiple forms such as reductions in the scale of funding provided or changing the scope of aid and its beneficiaries (Huffstetler *et al.*, 2022). These nuances in donor transition or changes in aid regimes are rarely investigated. Our study therefore focused on understanding changing aid regimes by the same donor over an extended period of time in Uganda.

### HIV funding context in Uganda

About 83% of the national HIV response in Uganda is externally funded (UAC, 2021). Since 2004, the President's Emergency Plan for AIDS Relief (PEPFAR) has been the largest bilateral source of financing for HIV programmes (Zakumumpa *et al.*, 2017). Between 2004 and 2014, PEPFAR support for the national HIV response followed a generalized public health approach (Gilks *et al.*, 2006) through supporting antiretroviral therapy scale-up countrywide. PEPFAR support entailed enhancement of workforce skills in HIV service delivery, on-site support supervision, community outreach activities for strengthening the HIV care continuum and supporting regional HIV laboratory hubs (El-Sadr *et al.*, 2012; Zakumumpa *et al.*, 2021c). PEPFAR support is largely off-budget and was, until recently, mainly channelled through US-based international non-governmental organizations (NGOs). GFATM aid in Uganda mainly supports the procurement of commodities such as antiretrovirals and condoms for HIV prevention (El-Sadr *et al.*, 2012; Zakumumpa *et al.*, 2017).

In 2013, a new global funding policy for PEPFAR focus countries (PEPFAR 3.0) was declared for the period 2013–19 (OGAC, 2014). The policy of 'geographic prioritization' (GP) sought to improve the allocative efficiency of PEPFAR support through aligning aid with HIV burden at the sub-national level to accelerate progress towards attainment of Joint United Nations Programme on HIV/AIDS (UNAIDS)' 90–90–90 targets in PEPFAR-supported countries (Wilhelm *et al.*, 2019; Qiu *et al.*, 2021; Rodríguez *et al.*, 2021). The GP policy

sought to increase PEPFAR aid in regions of Uganda with a higher HIV burden and reduce aid for areas with relatively low HIV burden, which was defined as having an HIV prevalence of  $\leq 0.64\%$  (Paina *et al.*, 2023). Between October 2015 and March 2017, the process of GP was implemented, whereby 10 districts in Northern and Eastern Uganda lost PEPFAR support and were meant to transition to Government of Uganda (GoU) funding known as 'central support'. This study includes two districts as cases (Bulambuli and Luuka). A detailed description of the GP policy and revised classification of investment priority by geographic sub-regions of Uganda have been described elsewhere (Wilhelm *et al.*, 2019; Qiu *et al.*, 2021; Rodríguez *et al.*, 2021; Paina *et al.*, 2023).

We sought to explore the impact of shifts in PEPFAR funding policy on HIV services in Eastern Uganda between 2015 and 2021. In doing so, we fill a gap in the literature on the medium- to long-term impact of donor transition policies in low-income settings.

## Methods

### Research design

We conducted a qualitative case study of two districts in Eastern Uganda to explore the impacts of changes in PEPFAR funding policy on HIV services between 2015 and 2021 (Calman *et al.*, 2013; Farrall *et al.*, 2016). Data were first collected between May and November 2017 (Round 1) as part of a larger evaluation of the PEPFAR 'GP' policy (Wilhelm *et al.*, 2019; Rodríguez *et al.*, 2021; Zakumumpa *et al.*, 2021c). A second round of data was collected from the same districts and types of participants between February and June 2022 (Round 2) as part of a WHO Alliance for Health Policy and Systems Research grant to carry out multiple country case studies on how reductions in external assistance for health influenced the coverage of previously donor-supported programmes. We report here the findings from the second round, which sought to capture both recent developments related to the research question and, retrospectively, the barriers and facilitators to maintain HIV service coverage over a 7-year period (2015–21).

### Analytical framework

The analytical framework that guides this study is adapted from Walt's and Gilson's (1994) 'policy triangle' framework. This framework is framed around four themes of 'context', 'actors', 'content' and 'process', which can be utilized to understand and analyse the context, process and actors surrounding donor transition processes. The framework posits that the interplay of context (which includes political, economic and social), content (the objectives, values and mission of a policy), process (the processes followed to consult with multi-stakeholders) and actors (the diverse range of participants in policymaking and implementation and their relationships, interests and agendas) shapes health programme outcomes. This framework was helpful in examining how the interaction of context, content, process factors and actors influences the ability to sustain the coverage of interventions previously supported by donor funding.

### Study sites and sample selection

Uganda runs a decentralized health system, whereby sub-national units known as districts retain overall responsibility

for social service provision (Gilson, 2013). Hence, districts were our primary unit of analysis. We purposively selected two districts from an earlier study phase to explore the impacts of changes in PEPFAR funding policy on HIV services at the sub-national level in Uganda over a 7-year period (2015–21). The selected districts were Luuka and Bulambuli in Eastern Uganda. Following the GP policy, three categories of priority for investments were declared: (1) ‘scale-up’ districts: to receive increased investment for HIV programming, (2) ‘maintenance’ districts: the same level of PEPFAR support and (3) ‘central support’ districts: meant to transition from PEPFAR support to GoU support. Our primary focus was ‘central support’ districts; hence, we purposively selected Luuka and Bulambuli districts that were designated to transition to ‘central support’ in 2016. We selected two districts (Budairi and Amuru) that retained PEPFAR support to explore whether their experiences were different to districts that transitioned to ‘central support’ (Qiu *et al.*, 2021).

### Data collection

As shown in Table 1, we conducted face-to-face interviews with representatives of PEPFAR implementing organizations at the national and sub-national levels ( $n=13$ ) to explore funding policy decisions and transition processes (Walt and Gilson, 1994). The interviews were conducted by two authors who have extensive backgrounds in qualitative health services research. The two authors were assisted by two co-investigators.

In-depth interviews were conducted in English with district health teams ( $n=24$ ). On average, each interview lasted between 45 and 60 minutes. The interviews were audio-recorded. The interviews were transcribed verbatim into text transcripts.

We sought to understand the impact of donor funding policy changes at the frontline level of service delivery. To this end, we conducted an embedded case study of four sub-district facilities located in each of the case study districts involving 14 semi-structured interviews with antiretroviral therapy (ART) clinic managers and 12 facility incharges (Gilson *et al.*, 2011). On average, each interview lasted between 45 and 60 minutes.

To supplement primary data collection and in order to paint a full picture with regard to ‘content’, ‘context’, ‘actors’ and ‘process’ (Walt and Gilson, 1994) involved in PEPFAR funding policymaking, we conducted a desk review of documents outlining programmatic targets including annual PEPFAR country operational plans (COPs) of 2018–21 (PEPFAR, 2018). In addition, we reviewed documents outlining PEPFAR’s strategic plans such as ‘PEPFAR 3.0’ (OGAC, 2014).

**Table 1.** Category of participants

	Round 1 (2017)	Round 2 (2022)
District health teams	23	24
Representatives of PEPFAR implementing organizations	14	13
Facility incharges	13	12
ART clinic managers	12	14
Total	62	63

### Data analysis

We followed processes recommended for ensuring rigour in qualitative data analysis suggested by Miles *et al.* (1994) within which we utilized a ‘framework analysis’ approach (Gale *et al.*, 2013). Although the analysis was iterative, we followed four major steps. The first step involved ‘data familiarization’ through multiple readings of the interview transcripts by three investigators (Henry Zakumumpa, Eric Ssegujja, Freddie Ssenooba). The second step entailed three authors (Henry Zakumumpa, Eric Ssegujja, Freddie Ssenooba) inductively ‘indexing’ our transcripts according to the dimensions illustrated in our study’s conceptual framework. We utilized the same coding scheme to explore themes and sub-themes for the semi-structured interviews. The third step was that of ‘charting’ or reorganizing the data according to the categories featured in our policy triangle framework and abstracting the coded data into thematic categories. The emergent inductive or data-driven codes were then deductively grouped under thematic matrices framed around the ‘policy triangle’ themes (actors, content, context and process) as shown in Table 2 (Walt and Gilson, 1994). Four investigators applied the matrices to each of the four transition phases in a team-based process that resolved disagreements through consensus. The fourth and final step was that of ‘interpretation and overall synthesis’, which involved all six investigators seeking, discussing and refining the patterns emerging within each framework category, by transition phase.

### Results

The results emerging from this study are presented according to the four significant PEPFAR policy milestone phases identified in Eastern Uganda between 2015 and 2021: (1) the 2-year period immediately around when the ‘GP’ funding policy was introduced (2015–17), (2) the period under ‘central support’ (2017–20), (3) the resumption of PEPFAR support to previously transitioned districts (October 2020) and (4) ‘local partner transition’ phase, which commenced in December 2021 (Table 3).

#### Implementation of ‘GP’ policy (2015–17)

Between October 2015 and March 2017, representatives of Strengthening TB and HIV & AIDS Responses in Eastern Uganda Project (STAR-E), a PEPFAR implementing organization, reported withdrawal of site-level support in 241 facilities in Luuka and Bulambuli districts in Eastern Uganda following categorization of these districts as having a low HIV incidence or low rates of new HIV infections relative to other districts of Uganda. The decision was based on PEPFAR data prior to GP policy implementation. The aspects of PEPFAR aid that were discontinued include monetary incentives for the HIV workforce for tasks such as community outreach, on-site supportive supervision for quality assurance and supply chain support for ensuring sufficient quantities of HIV commodities. Post-PEPFAR transition, patients and health workers at study facilities perceived a decline in the quality of HIV services as well as disruptions in service delivery.

*The quality of HIV services declined because these services were heavily supported by STAR-E (PEPFAR implementing organization). During stock-outs, STAR-E could look around the region for excess commodities. This was no*

**Table 2.** Summary of perceived impact of PEPFAR transition for the period 2017–20

Theme by health system building block	Summary findings	Comment/interpretation
Content		
Service delivery	<ul style="list-style-type: none"> <li>• Loss of PEPFAR support resulted in disruptions in service delivery in transition districts.</li> <li>• More discernible impacts as perceived by participants include increased loss to follow-up (LTFU) cases, community HIV transmissions, reduced TB case notifications and reduced laboratory samples handled.</li> </ul>	<ul style="list-style-type: none"> <li>• The impacts were more readily identified due to the 3-year time lag (2017–20), where the effects of reduced follow-up were contributory.</li> </ul>
Financing	<ul style="list-style-type: none"> <li>• Due to a heavy reliance on external assistance by 83%, PEPFAR transition left an enormous gap in HIV programming.</li> <li>• There was no major alternative external donor funding after PEPFAR transition (2017–20).</li> <li>• The central and local governments did not step up to fill the funding gap left after loss of PEPFAR investments.</li> </ul>	<ul style="list-style-type: none"> <li>• We did not notice a civil society advocacy role in getting the Uganda government (GoU) to replace PEPFAR support, which could partly explain government inaction, but also some have observed that GoU inaction on HIV may be a way of attracting donor aid. PEPFAR may have taken a U-turn and returned.</li> </ul>
Human resources	<ul style="list-style-type: none"> <li>• Monetary allowances to the HIV workforce for community outreaches ceased.</li> <li>• Facility-level cadres such as data managers, counsellors or graduate laboratory technicians were not absorbed following transition.</li> <li>• PEPFAR GP policy meant loss of support for refresher trainings of health workers including updates on HIV care and treatment between 2017 and 2020.</li> </ul>	<ul style="list-style-type: none"> <li>• Changes in PEPFAR support for human resources had knock-on effects on service delivery, governance, supply chain and other sub-systems and arguably had the most profound ripple effect.</li> </ul>
Procurement	<ul style="list-style-type: none"> <li>• Loss of PEPFAR-salaried supply chain experts was perceived to have contributed to stock-outs of antiretrovirals.</li> </ul>	<ul style="list-style-type: none"> <li>• The loss of sub-national level supply chain experts meant strategies such as re-distribution of commodities stock across regions stopped.</li> </ul>
Information systems	<ul style="list-style-type: none"> <li>• Loss of community outreach undermined patient follow-up and monitoring systems</li> <li>• Loss of PEPFAR-supported facility-level data managers negatively impacted tracking of HIV indicators and broadly health information systems and reporting.</li> </ul>	<ul style="list-style-type: none"> <li>• The current establishment structure for facility-level workforce does not include graduate-level data management/health information specialists. These cadres are often PEPFAR supported.</li> </ul>
Context	<ul style="list-style-type: none"> <li>• HIV programmes are more donor dependent than most health programmes.</li> <li>• Districts are dependent on central government grants and unable to mount substantial transition responses on their own.</li> <li>• There appeared to be low civic competence in communities in demanding government action on replacing lost PEPFAR investments or remedial actions.</li> </ul>	<ul style="list-style-type: none"> <li>• Transition occurred in a context where GoU had grown to depend on international assistance for almost two decades.</li> </ul>
Process	<ul style="list-style-type: none"> <li>• Decisions on transition followed a 'top-down' trajectory and were handed down from PEPFAR 'global' to PEPFAR-Uganda and further down to local governments.</li> <li>• PEPFAR implementing organisations were mandated to spearhead transition at the sub-national level.</li> <li>• District health teams were 'informed' rather than 'consulted' on transition criteria and timelines.</li> </ul>	<ul style="list-style-type: none"> <li>• Overall, information around transition timelines was shared with local actors. However, participation of district-level actors was not prioritized.</li> </ul>
Actors	<ul style="list-style-type: none"> <li>• Transition processes involved multiple actors ranging from PEPFAR 'Global', PEPFAR-Uganda, sub-national PEPFAR implementing organizations (IPs), district health teams, district political and technical leadership and facility-level officials.</li> </ul>	<ul style="list-style-type: none"> <li>• There was an imbalance in influence and authority between 'local' and 'external' actors in setting the agenda on transition (criteria and timelines). A similar imbalance was noticed between central government and local government officials.</li> </ul>

*longer happening. We stopped doing community outreach because the support staff employed by PEPFAR left. The Ministry of Health was only providing (HIV) medicines. There are services like nutrition support to patients. All these stopped (facility incharge 02, Eastern Uganda).*

Disruptions in HIV services was a recurring theme also reported at sub-district facilities transitioned from PEPFAR support. Commodity stock-outs were perceived to be more frequent post-transition due to loss of sub-national level PEPFAR-salaried supply chain experts. Health workers and

patients concurred in reporting a narrowing in the scope of HIV services offered such as the cessation of community outreach activities due to the discontinuation of workforce monetary allowances for outreach.

*The last time we received support for community outreach was in 2015 under STAR-EC. After PEPFAR transition we lost the additional workforce supported by PEPFAR for outreach such as 'community linkage facilitators' and 'mentor mothers' for our pediatric clients. All those people got jobs elsewhere. We could no longer do outreach activities (HIV clinic manager, Eastern Uganda-03).*

**Table 3.** PEPFAR funding policy milestones in Eastern Uganda (2015–21)

Funding policy milestones	Perceived impacts on district health systems	Perceived impacts on HIV services
2015–17 'GP' funding policy	<ul style="list-style-type: none"> <li>• Loss of supply chain experts;</li> <li>• Withdrawal of incentives for HIV workforce;</li> <li>• Withdrawal of on-site support supervision.</li> </ul>	<ul style="list-style-type: none"> <li>• Decline in quality of HIV care ('frequent stock-outs', 'longer waiting time' and 'chaotic triage');</li> <li>• Narrowing of scope of HIV services;</li> <li>• Cessation of community outreaches.</li> </ul>
2017–20 Period under 'central support' or Uganda government stewardship	<ul style="list-style-type: none"> <li>• Financing gaps in HIV programming;</li> <li>• Health workforce gaps for community outreach.</li> </ul>	<ul style="list-style-type: none"> <li>• Disruption of HIV care continuum;</li> <li>• LTFU (and deaths);</li> <li>• Rise in community transmissions;</li> <li>• Reversals in TB control;</li> <li>• Declining viral load suppression;</li> <li>• Delay in national HIV policy uptake.</li> </ul>
October 2020 'Resumption of PEPFAR aid'	<ul style="list-style-type: none"> <li>• Reduced HIV-specific funding.</li> <li>• Call for HIV integration with other services.</li> </ul>	<ul style="list-style-type: none"> <li>• HIV testing rates increased;</li> <li>• Community outreaches revived;</li> <li>• Resumption of PEPFAR support however reduced 'dose delivered' at the site level.</li> </ul>
December 2021 'Transition from US- based to Local Fund- holder partners'	<ul style="list-style-type: none"> <li>• Governance deficits due to delayed mandate uptake;</li> <li>• Financing disbursement delays.</li> </ul>	<ul style="list-style-type: none"> <li>• HIV transmission stays high compared to period prior to GP;</li> <li>• Re-intensified focus on HIV and TB.</li> </ul>

Between May and November 2017, participants indicated that specialized paediatric HIV clinics ceased and that children were mixed with adults on routine HIV clinic days of the week. Hence, the paediatric patients who have poorer ART adherence and need individualized counselling were not receiving this differentiated care. Nutrition support to paediatric and adult patients was also stopped. Longer waiting time at HIV clinics and a less organized triage system were reported after PEPFAR transition due to loss of monetary allowances for selecting 'expert patients' who serve as support staff at ART clinics.

#### The caretaker that did not show up: the period under 'central support' (2017–20)

Participants reported that after being transitioned from PEPFAR support to Uganda government 'central support' in 2017, HIV services did not attract any major alternative international assistance. It was also indicated that the Ministry of Health and district local governments did not replace the funds lost due to PEPFAR's GP policy or offer any substantive support to help affected districts cope in the post-transition period (2017–20).

*We would meet Ministry of Health officials we would engage them and we would tell them: 'You people, we were told to come to you, we are stranded'. They continued to promise us, they would tell us 'Global Fund is coming', but we could not see any support coming. Even the district didn't help. Nobody came to our rescue* (district health team member, Eastern Uganda-02).

#### Perceived impact on HIV indicators

While the effects of PEPFAR transition were starting to take shape in transitioned districts in 2017, the 3-year period that followed (2017–20) saw this impact manifest more prominently. Participants perceived the cumulative impact of prolonged gaps in funding for HIV programming to have had negative impacts on the population-level HIV care continuum. In other words, they reported a marked reduction in the

number of people undergoing HIV testing, those immediately linked to care, those retained in care, enrolment on ART and those who were virally suppressed (Hogg, 2018) in Eastern Uganda following PEPFAR transition.

*A time came when they realized that the districts they called 'transition' were badly off. The results of the most recent national survey on HIV prevalence show that the districts which were categorized as 'transition', were again having a lot of HIV undiagnosed and unmanaged* (district health team member, Eastern Uganda-01).

There was a commonly held perception, especially across district health managers, that the multi-year effect of the loss of PEPFAR support led to a reversal in gains in HIV epidemic control in Bulambuli and Luuka districts. This was manifested in participant reports of increased loss to follow-up (LTFU) cases, increased reports of deaths among HIV patients in rural communities and increasing trends in TB transmission.

A marked increase in cases of patients LTFU was attributed to scaling back community outreach activities that support ART provision in Luuka and Bulambuli districts. Facility managers reported major reductions in their patient follow-up activities that were meant to optimize treatment adherence and viral suppression. Facilities reported increased number of missed appointments by patients. Retention in HIV care suffered as health workers scaled back the phone calls and outreach visits to remind patients of their clinic appointments. Consequently, HIV clinic managers reported considerable numbers of patients with whom they had completely lost contact between 2017 and 2020.

*We had many challenges (post-transition). Our rates of retention in HIV care dropped. So, a number of patients were lost to follow-up. HIV testing was only being done at the facility. Hence, identifying new cases was a challenge. Those tested here are typically people who have come to see a clinician and then the clinician suspects that*

*they maybe be positive. That is why you see the numbers on positivity rates kept falling* (ART clinic manager, 03, Eastern Uganda-07).

Unlike in the immediate aftermath of transition in 2017 (Round 1), increased number of patient deaths in the community were frequently reported during the second phase of data collection (2020). Participants attributed the increasing mortality of patients to the cessation of community outreach activities that facilitate patient follow-up and ART adherence support.

Facility-level participants in Luuka and Bulambuli districts described a trajectory of declining viral load suppression rates post-transition between 2017 and 2020. Poor viral load suppression in paediatric patients in the post-transition phase was identified as an intractable challenge across Luuka and Bulambuli districts. Declines in TB case notifications were reported across these districts. District health team members in Bulambuli district decried the drop in TB infection control measures including at the facility-level during routine clinic days that are heavily congested and characterized by long patient queues. Due to cessation of community outreach activities, contact tracing of TB cases was not pursued due to lack of funds. From the perspective of participants, the 3-year post-transition trajectory represents a pronounced decline in TB control in transition districts. Participants described trends of declines in HIV epidemic control between 2017 and 2020.

*We used to hold sub-national level review meetings as Eastern Uganda. When you looked at our trends, they were very bad, you look at PMTCT (prevention of mother-to-child transmission) babies testing positive were many, mothers who tested positive are twenty. So they were concerned. The number of children turning positive was rising. There was no proper follow up. A patient disappears you cannot follow up and you don't know where they are. So the numbers were increasing* (district health team, Eastern Uganda-04).

The latest available data on HIV prevalence by district in Uganda from December 2020 show that Luuka and Bulambuli districts had their HIV prevalence more than double (at 2.2%) based on Uganda AIDS Commission data when compared to the pre-transition prevalence (<0.64%), which was the trigger for transition in 2015 based on PEPFAR data (Paina *et al.*, 2023).

### Lagging behind in implementing updated national HIV treatment guidelines

PEPFAR transition was associated with Luuka and Bulambuli districts falling behind districts that retained PEPFAR support in implementing important changes in national HIV treatment guidelines between 2017 and 2020. Unlike PEPFAR-supported districts such as Budadiri and Amuru, transitioned districts were not invited to receive training in 2018 when the Ministry of Health in Uganda adopted dolutegravir (DTG)-based antiretroviral therapy for all HIV patients in the country (Zakumumpa *et al.*, 2021a). Facility-level informants reported receiving 'new boxes of drugs' (DTG) without accompanying guidelines.

*Actually, it was a bad story with HIV because we had no one supporting us. The ministry (MoH) was not doing its*

*work if truth to be told, because even the new HIV guidelines could not be rolled out in the district. We were just gambling* (district health team, 03, Eastern Uganda).

Earlier in April 2017, the Ministry of Health rolled out implementation guidelines for novel HIV 'differentiated service delivery' aimed at decongesting facilities and reducing the burden of care for stable patients (Zakumumpa *et al.*, 2021b). This entailed community-based drug distribution at out-of-facility outreach sites and voluntary groups of patients who pick medication refills on behalf of their peers. Although the majority of facilities in Uganda implemented differentiated HIV services in 2018 (Zakumumpa *et al.*, 2021c), Luuka and Bulambuli did not participate in this national roll-out until much later.

*Everything was in a mess. Nothing was being done. New HIV treatment guidelines were not being implemented here in Luuka District. Just imagine all the guidelines from 2016 up to 2020. How many guidelines were updated during that time? Actually, 'differentiated service delivery' was supposed to be implemented in 2017 but we did not come on board* (district health team member, Eastern Uganda-02).

In 2020, the Ministry of Health released updated national HIV treatment guidelines. Budadiri and Amuru districts, which retained PEPFAR support, were sensitized on these treatment guidelines including critical guidance on preventing medication harm in rolling out DTG-based and TB preventive therapy concurrently, which had been found to result in drug toxicities in some patients (Zakumumpa *et al.*, 2021c).

Participants across the transition districts reported a delay in coming on board with these updated guidelines. This is because such routine sensitizations and trainings of the HIV workforce were usually supported by PEPFAR. This highlights the high levels of dependence on PEPFAR support for frontline HIV service delivery across Uganda.

Overall, participants from Luuka and Bulambuli District perceived loss of PEPFAR support to have contributed to a reversal of gains in HIV epidemic control in their districts when compared to the pre-transition phase. The district health team in Luuka district indicated that pre-transition, the HIV prevalence stood at 1% but was currently double implying that the district is yet to regain its pre-transition epidemic control status even after resumption of PEPFAR support.

*When our district was being transitioned they were saying that HIV prevalence was low at less than 1%, but for us we thought that maybe it was a data issue. We tried to argue it out but they could not listen to us. In 2020, they produced new statistics and Luuka (District) had an HIV prevalence of 2.2%* (district health team, Eastern Uganda-02).

### GP policy reversal and resumption of aid (October 2020)

District health teams in Luuka and Bulambuli in Eastern Uganda indicated that PEPFAR resumed site-level support to their districts in October 2020. From the perspective of district health teams, PEPFAR resumed support due to worsening HIV indicators in transitioned districts.

*So, in October of 2020 they (PEPFAR) returned and quickly showered us with targets. The targets are catch-up targets because of the (GP) policy mistake they made (district health team, Eastern Uganda-05).*

The indicators cited by district health teams include HIV prevalence. Although we did not have access to longitudinal data on district HIV prevalence, at the onset of GP in 2015, Luuka and Bulambuli districts were designated to lose PEPFAR support due to having a ‘low HIV burden’ (i.e. HIV prevalence <0.64%) (Paina *et al.*, 2023) based on PEPFAR data at the time. In February 2022, district health teams in the two districts reported that prevalence stood at 2.2% based on 2020 publicly available data published by the Uganda AIDS Commission (UAC, 2021). Participants reported that the latest national survey data from the Uganda Population-based HIV Impact Survey (UPHIA) of 2016–17, released in 2019, represented part of the source of data underpinning the policy reversal.

*All was not well in HIV indicators. Things were not looking good in Luuka district. So, in 2020, that is when RHITES-E (PEPFAR implementing organization) said now Luuka (district) we can see your HIV numbers raising. So, the support resumed in 2020, they started supporting us in HIV. We started seeing life coming back to the ART clinic. It was re-organized. We started receiving support staff from RHITES-E. Follow-up of patients in the community resumed (district health team, Eastern Uganda-04).*

While we cannot confirm the increase in prevalence using data available to us, the district managers’ observations and concerns are important and might have contributed, alongside other contextual factors, to PEPFAR’s re-engagement in the district. Documentary evidence revealed that the policy reversal was communicated subtly in PEPFAR’s Uganda COP of 2019 (PEPFAR, 2019). The COP alludes to an expansion in the number of districts supported nationally under PEPFAR support owing to compelling new data. The COP stops short of announcing a reversal of the GP policy but clearly indicates providing HIV support nationally as opposed to targeted support of particular sub-national units, which was the thrust of the ‘GP’ policy. A year later, in the COP of 2020, the language changed to ‘geographic and population prioritization’, indicating a subtle shift away from investing solely in specific sub-national units in its ‘investment profile’ of HIV support to Uganda (PEPFAR, 2020). To complete the policy change, in the COP of 2021, it is shown that there is no district in Uganda under ‘central support’ classification, and all districts are now ‘scale-up’ districts (PEPFAR). There is a recurring reference to aligning PEPFAR investment with newer data that ‘include the 2016 UPHIA and routine programme data’ (PEPFAR, 2021).

PEPFAR resumed site-level support in October 2020 with stringent targets to reverse declines in HIV indicators in Bulambuli and Luuka districts. Another key objective of resumption of PEPFAR support reported by district health teams was the need to catch up on updated national HIV treatment guidelines.

*One of the things they were focusing on when PEPFAR resumed support was the gap we had in catching up with updated national HIV treatment guidelines. They trained our workforce and updated us on changes in national*

*HIV services policy (district health team member, Eastern Uganda-06).*

The nature of HIV funding reinstated by PEPFAR entailed; revival of community outreach, training health workers in updated national HIV treatment guidelines, strengthening data reporting, monetary allowances for support staff to plug staffing gaps at ART clinics and re-invigorating the prevention of mother-to-child transmission (PMTCT) programme. Participants associated increased HIV testing rates with the resumption of PEPFAR aid.

*When RHITES-East (PEPFAR IP) came back and we started supporting the facilities again we began again identifying the numbers of the newly infected after ramping up HIV testing. That is when the positivity rates now began increasing’ (representative, PEPFAR implementing organization, Eastern Uganda-02).*

Even with the resumption of site-level support to Luuka and Bulambuli districts in October 2020, PEPFAR declared less HIV-specific funding in favour of a more integrated health services agenda. The regionally based PEPFAR implementing organizations Regional Health Integration to enhance Services (RHITES)-East and RHITES-East Central Uganda (EC) (RHITES-East; RHITES-EC) had a broader mandate beyond HIV programming in the quest for a less vertical approach towards a more integrated health services agenda incorporating malaria control and maternal and newborn care programming. From the perspective of district health teams, the implication was a reduction of HIV-specific programming funding. Websites reviewed indicate this switch to a more integrated health services approach aligned with the annual targets laid out in the COP of 2020 (RHITES-East; RHITES-EC). Table 3 summarizes the major themes and related interpretations from our study, by health system building block.

### ‘Local partner transition’ in December 2021

Participants reported that in December 2021, PEPFAR announced a funding policy shift of routing aid away from international to ‘local service partners’ at sub-national level countrywide in a process dubbed ‘local partner transition’. New contracts for ‘implementing partners’ at the sub-national level for HIV sector stewardship were signed with Baylor Uganda, a local NGO working in Eastern Uganda, while contracts with international NGOs such as IntraHealth International were not renewed. This policy shift was also reported in Budadiri and Amuru districts.

In addition, PEPFAR announced a return to an intensified focus on HIV and TB in an apparent policy shift from an earlier stance on a more integrated health services agenda. However, district health teams described governance deficits in HIV sector stewardship due to perceived unpreparedness of local implementing partners to replace international NGOs and the indifference by the national government to these donor funding policy changes despite the perceived impacts on frontline HIV services.

Delays in disbursement of HIV programming financing for site-level support were frequently reported across the facilities we visited in Eastern Uganda during our most recent round of data collection. From the perspective of district health teams

and HIV clinic managers, local implementing organizations were not yet 'felt on the ground' in terms of site-level support such as for on-site supportive supervision, strengthening HIV commodities' supply chains and HIV workforce allowances for community outreach.

*The problem also I have seen from the transition from international to local NGOs is that our local NGOs are not prepared to take over. They have taken really long to start compared to RHITES-EC when they were taking over from STAR-EC. RHITES-EC took some few weeks to set up shop. They picked up very fast. I think that maybe there are organizational capacity issues for a local NGO in handling a big project like this involving over 86 million dollars (district health team, Eastern Uganda-07).*

As part of its plan of gradually transitioning to local NGOs, PEPFAR intended international NGOs to remain under contract for an additional year to provide 'technical support' to local service partners as they assumed their full responsibility. However, frontline providers were not privy to these transition arrangements. This may have contributed to perceptions by providers of 'unpreparedness' by local service partners particularly when delays in receiving on-site supportive supervision in HIV services delivery were experienced.

According to a representative of a PEPFAR implementing organization in Eastern Uganda, local NGOs were given a 1-year transition period during which international NGOs would mentor them to take on the mantle of HIV programming stewardship. This could partly explain facility-level perceptions of delays in resumption of site-level support during the transition to 'local service partners'.

*We heard almost three months ago that a local NGO would take over as our regional PEPFAR IP (implementing organization). But up to now we have not yet felt them on the ground. They have not made even one on-site support supervision. They have not supported us on supply chain management. (HIV clinic incharge, Eastern Uganda-04).*

Documentary evidence corroborated this policy shift to 'local service partners' or indigenous NGOs and away from US-based implementing partners. This policy decision was taken at a global level and was a key funding policy objective in PEPFAR focus countries to promote 'country ownership' and the long-term sustainability of national HIV responses. The policy aims at routing at least 70% of PEPFAR aid through 'local service partners' (USAID, 2021).

## Discussion

Between 2015 and 2021, we identified four periods in which districts in Eastern Uganda were significantly affected by changes in PEPFAR funding policies. Our respondents reported that the changes in donor funding policy that unfolded over the 7-year period had profound impacts on frontline HIV service delivery. Our retrospective analysis suggests that the cumulative effect of gaps in HIV funding occasioned by PEPFAR transition along with the low priority by the Uganda government in replacing lost PEPFAR investments in HIV programming negatively impacted HIV services

in Luuka and Bulambuli districts between 2017 and 2020. From the perspective of district health teams, this was manifested in increases in LTFU in outpatient HIV care, increased community transmission of HIV, declining viral suppression, particularly among paediatric patients, and increased reports of patient deaths.

Although our previous analysis found that the impact of transition was only beginning to materialize in 2017 and essentially revolved around declining quality and a narrowing in the scope of HIV services offered (Zakumumpa *et al.*, 2021c), participants in our latest round of data collection were more resolute in eliciting the long-term impacts of transition on HIV services and district health systems. District health teams perceived the prolonged delay in replacing PEPFAR investments in HIV programming between 2017 and 2020 to have contributed to loss of gains in HIV epidemic control in districts that lost PEPFAR support. For instance, district health teams in Eastern Uganda reported that the HIV prevalence rates in Luuka and Bulambuli districts had increased from <0.64% in 2015 (Paina *et al.*, 2023) and stood at 2.2% based on data ending on 31 December 2020 (UAC, 2021). While we cannot confirm the increase to 2.2% prevalence and are unable to account for all factors that may have contributed to the change in prevalence, district health teams reported significant reductions in funding for HIV programming that they found concerning, and that PEPFAR felt the newer data was concerning enough to warrant re-engaging in the transitioned districts. We recommend future research to assess the impact of donor transition on long-term HIV indicators such as HIV prevalence (UAC, 2021).

Previous studies on PEPFAR transition away from site-level support in South Africa found that disruptions in HIV services and declining quality of HIV care were common (Katz *et al.*, 2015). However, Kavanagh and Dubula-Majola (2019) found that the policy impact had not yet materialized at the site level in their sample of facilities. Although these studies in South Africa (Katz *et al.*, 2015; Kavanagh and Dubula-Majola, 2019) and Uganda (Wilhelm *et al.*, 2019) were conducted a few months after PEPFAR transition, a unique contribution of the present study is a follow-up data collection in 2022 thereby providing a longitudinal lens on the changing aid regimes and the perceived impact at sub-national level over a period of 7 years. A USAID study found that cessation of external funding leads to disruption in HIV services and observed 'an inability to sustain the compendium of services in the post-transition period' for middle-income countries undergoing donor transitions in HIV support (Biradavolu *et al.*, 2017). Our research confirms the findings of other studies conducted in India after donor transition of the Avahan initiative, a large HIV prevention intervention, reported stock-outs of HIV commodities and a narrowing in the HIV services package in 130 sites (Rodríguez *et al.*, 2015).

Our study has implications for future donor transition planning with respect to (1) the need for donors to align with recipient government systems such as targeting donor transitions to coincide with annual national budget cycles, (2) jointly planned transition road maps with local stakeholders including sub-national public sector actors, (3) the need for building-in monitoring and evaluation mechanisms such as tracking progress on receipt government mandate uptake post-transition and (4) the need for engaging civil society actors in advocacy for prioritization of transition responses



by recipient governments. Other studies have engaged with necessary management practices to support responsible donor transitions (Amaya *et al.*, 2014; Vogus and Graff, 2015; Bennett *et al.*, 2015b; Burrows *et al.*, 2016).

An important finding of this study is that PEPFAR subtly reversed its earlier policy of ‘GP’ as it was framed between 2015 and 2017. PEPFAR resumed facility-level support in Luuka and Bulambuli in October 2021, albeit with significantly fewer resources. This finding relating to resumption of PEPFAR support was triangulated with documentary evidence from published PEPFAR annual programme targets known as ‘COPs’ (PEPFAR). Ours is a rare case study, documenting a reversal in funding policy by a major external donor in Uganda and the changing aid regimes at sub-national level over a 7-year period. However, Kavanagh and Dubula-Majola (2019) have previously noted policy shifts by PEPFAR in South Africa.

Our study highlights the heavy dependence on PEPFAR for routine HIV service delivery in Uganda including in funding basic refresher HIV workforce trainings in updated national HIV treatment guidelines. We found that HIV facilities in Luuka and Bulambuli districts, which lost PEPFAR site-level support in 2017, were unable to come on board with new national guidelines on HIV services delivery adopted between 2017 and 2020 unlike districts that retained PEPFAR support. Our study underlines the importance of increasing reliance on domestic financing of the HIV response in Uganda. Securing the financial sustainability of HIV programming is critical to attainment of UNAIDS’ 95–95–95 targets in Eastern Uganda. The need to fast track the long-proposed AIDS Trust Fund to be financed through a levy on soft drinks in Uganda cannot be over-emphasized (Birungi and Colbourn, 2019). The role of civil society organizations in advocacy around addressing the ‘limited political will of governments to replace donor-funded programmes’ (Gotsadze *et al.*, 2019) and in enhancing the priority of donor transition in the policy agendas of aid-dependent countries has been highlighted.

A noteworthy finding of our study is the power asymmetry between PEPFAR and the recipient government in setting HIV funding policy at the sub-national level in Eastern Uganda during the period under review. There was a noticeable power imbalance with limited decision-making spaces in HIV funding policymaking for local governments at sub-national level in Eastern Uganda. During the period under review (2015–21), decisions around HIV funding policy changes were often determined above country. PEPFAR implementing partners appeared to operate as ‘agents’ in implementing these policy changes ‘on their own terms’ (Abimbola *et al.*, 2021) at sub-national level in Uganda. We observe policy shifts by PEPFAR towards and away from integrated health services during the period under review. Although there was an initial pivot towards integrating HIV services with other health programmes such as maternity services, in the final policy transition phase we identified, PEPFAR reverted to a more vertical focus on HIV and TB. Another noteworthy policy change was the ‘localization agenda’ or transition to local partners, where PEPFAR seeks to route at least 70% of its aid through locally based organizations in a bid to increase local ownership and promote the sustainability of HIV epidemic control in Uganda. Although there are several commentaries on the importance of transition to authentic ‘local entities’ (Kaliel *et al.*, 2023), in this study, district

health teams and facility-level participants perceived unpreparedness by local NGOs in taking on the full mantle of responsibility from international NGOs as a major constraint to the ‘localization agenda’. We find utility in the policy triangle in helping us unravel the skewed ‘process’ of implementing HIV funding policy changes in Eastern Uganda. Decision-making around HIV sector investments appeared to follow a top-down approach with limited spaces for participation by the recipient government. This could have contributed to health programme transition outcomes particularly around the national government’s prolonged delay in assuming financial responsibility for HIV programming in Luuka and Bulambuli districts. We note PEPFAR’s use of data as the basis of funding policy changes in 2015 when triggering transition in Luuka and Bulambuli districts, which were assessed to have ‘low HIV burden’ (<0.64%). In October 2020, PEPFAR resumed site-level support alluding to ‘new data’ as the basis for expanding coverage nationally as reported in the COP of 2020 (PEPFAR). However, the accuracy of PEPFAR’s 2015 data was contested by district health teams during both rounds of data collection. Previous studies have noted the ‘politics of data’ in global health decision-making. Previous studies have also highlighted the use of data as a tool of power in decision-making as those with data often wield influence in global health decision-making (Paina *et al.*, 2023). Aid-recipient countries often have weak financial capacity for collecting authoritative data sets on health programmes. Hence, those with the financial resources to collect this data process it in a way that addresses their interests and in a way that justifies their agendas (Kavanagh *et al.*, 2020). The occasional tension between transnational actor interests and those of donor recipient countries has been observed in previous studies. Parkhurst *et al.* (2021) highlight ‘competing interests’ and ‘clashing ideas’, notably the power imbalance between aid-recipient countries and external donors in setting malaria control policy in seven African countries with limited decision spaces for local technocrats and policy elite (Gilson *et al.*, 2018). Kentikelenis and Rochford (2019) have highlighted power asymmetries in global health governance (Abimbola *et al.*, 2021).

Although previous studies have conceptualized donor transitions in terms of cessation of external funding (Wiltsey Stirman *et al.*, 2012), our longitudinal analysis of changing aid regimes by PEPFAR in Eastern Uganda presents an alternative dimension—one entailing changing donor priorities with external grants that are ‘time-limited’ usually in 5-year cycles and are recurring in nature but with shifting ‘investment’ priorities. Further research to deepen the understanding of the notion of changing aid regimes by the same major donor over multiple years is warranted.

## Limitations

Our study had multiple limitations. Recall bias and attrition of some informants are common constraints in retrospective analysis involving the number of years we assessed. We endeavoured to mitigate these limitations through data triangulation from documentary sources (such as PEPFAR COPs) to corroborate participants’ reports as well as websites of PEPFAR implementing organizations in Eastern Uganda. Additionally, we had multiple informants for each participant category (Table 1). In this study, we focus more substantially

on the period between 2017 and 2020 due to a longer time lag that enabled the impacts to manifest more readily. Some of the funding policy changes implemented such as ‘local service partner transition’ were implemented in 2021 and were only beginning to take shape at the time of data collection. The four themes of policy triangle were helpful in categorizing our findings. However, we found that there is a dynamic interaction in these themes, which is not adequately addressed in the framework.

## Conclusion

Our analysis suggests that compared to districts that retained PEPFAR support, the transitioned districts of Luuka and Bulambuli in Eastern Uganda fell behind the rest of the country in implementing important changes in the national ART treatment guidelines such as in rolling out new and more efficacious HIV medicines and implementing novel less-intensive HIV care models. Securing the financial sustainability of HIV programming is critical to attainment of UNAIDS’ 95–95–95 targets in Eastern Uganda.

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## Data availability

The datasets generated during and/or analyzed during the current study are not publicly available due to ethical reasons but are available from the corresponding author on reasonable request.

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## Author contributions

H.Z., E.S. and F.S. assisted with the conception or design of the work, data collection and data analysis and interpretation. L.P., Z.S. and J.N. assisted with the data analysis and interpretation and critical revision of the article. H.Z. assisted with drafting the article.

## Reflexivity statement

The group of authors includes researchers at the early-career (H.Z., E.S. and J.N.), mid-career (L.P. and Z.S.) and senior-career (F.S.) stages from Africa (Uganda), North America (L.P.) and Europe (Z.S.). This represents a good balance in terms of seniority. We have two female authors on the team, and four are male. We received funding for this study from WHO Alliance for Health Policy and Systems Research. Although this study was externally funded, it relays local stakeholder perspectives in Uganda on global health aid policy shifts and their impacts on frontline HIV services.

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## References

- Abimbola S, Asthana S, Montenegro C *et al.* 2021. Addressing power asymmetries in global health: imperatives in the wake of the COVID-19 pandemic. *PLoS Medicine* 18: e1003604.
- Alonso-Garbayo A, Raven J, Theobald S *et al.* 2017. Decision space for health workforce management in decentralized settings: a case study in Uganda. *Health Policy and Planning* 32: iii59–66.
- Amaya AB, Caceres CF, Spicer N, Balabanova D. 2014. After the Global Fund: who can sustain the HIV/AIDS response in Peru and how? *Global Public Health* 9: 176–97.
- Banigbe B, Audet CM, Okonkwo P *et al.* 2019. Effect of PEPFAR funding policy change on HIV service delivery in a large HIV care and treatment network in Nigeria. *PLoS One* 14: e0221809.
- Bennett S, Rodriguez D, Ozawa S *et al.* 2015b. Management practices to support donor transition: lessons from Avahan, the India AIDS Initiative. *BMC Health Services Research* 15: 1–11.
- Bharali I, Mao W, Huffstetler H *et al.* 2020. Perspectives on transitions away from donor assistance for health: a discrete choices experiment in Sri Lanka. *The Lancet Global Health* 8: S25.
- Biradavolu M, Deshpande A, Guida M *et al.* *Fostering PEPFAR Sustainability through Leadership, Management, and Governance*. 2017. [https://www.usaid.gov/sites/default/files/documents/1864/PY6\\_O3.9\\_Fostering\\_PEPFAR\\_Sustainability\\_through\\_LMG\\_FINAL\\_09.22.17-508.pdf](https://www.usaid.gov/sites/default/files/documents/1864/PY6_O3.9_Fostering_PEPFAR_Sustainability_through_LMG_FINAL_09.22.17-508.pdf), accessed 14 December 2022.
- Birungi C, Colbourn T. 2019. It’s politics, stupid! A political analysis of the HIV/AIDS Trust Fund in Uganda. *African Journal of AIDS Research* 18: 370–81.
- Brown S. 2021. The impact of COVID-19 on development assistance. *International Journal* 76: 42–54.
- Burrows D, Oberth G, Parsons D, McCallum L. 2016. *Transitions from Donor Funding to Domestic Reliance for HIV Responses. Recommendations for Transitioning Countries*. Nairobi: APM Global Health.
- Calman L, Brunton L, Molassiotis A. 2013. Developing longitudinal qualitative designs: lessons learned and recommendations for health services research. *BMC Medical Research Methodology* 13: 1–10.
- El-Sadr WM, Holmes CB, Mugenyi P *et al.* 2012. Scale-up of HIV treatment through PEPFAR: a historic public health achievement. *Journal of Acquired Immune Deficiency Syndromes* 60: S96.
- Farrall S, Hunter B, Sharpe G, Calverley A. 2016. What ‘works’ when retracing sample members in a qualitative longitudinal study? *International Journal of Social Research Methodology* 19: 287–300.
- Gale NK, Heath G, Cameron E, Rashid S, Redwood S. 2013. Using the framework method for the analysis of qualitative data in

- multi-disciplinary health research. *BMC Medical Research Methodology* 13: 1–8.
- Gilks CF, Crowley S, Ekpini R *et al.* 2006. The WHO public-health approach to antiretroviral treatment against HIV in resource-limited settings. *The Lancet* 368: 505–10.
- Gilson L, World Health Organization. 2013. *Health Policy and System Research: A Methodology Reader: The Abridged Version*. World Health Organization. [https://iris.who.int/bitstream/handle/10665/85536/9789241503747\\_eng.pdf](https://iris.who.int/bitstream/handle/10665/85536/9789241503747_eng.pdf).
- Gilson L, Hanson K, Sheikh K *et al.* 2011. Building the field of health policy and systems research: social science matters. *PLoS Medicine* 8: e1001079.
- Gilson L, Orgill M, Shroff ZC. 2018. World Health Organization *A Health Policy Analysis Reader: The Politics of Policy Change in Low-and Middle-income Countries*. World Health Organization. <https://iris.who.int/bitstream/handle/10665/310886/9789241514514-eng.pdf>.
- Gotsadze G, Chikovani I, Sulaberidze L *et al.* 2019. The challenges of transition from donor-funded programs: results from a theory-driven multi-country comparative case study of programs in Eastern Europe and Central Asia supported by the Global Fund. *Global Health: Science and Practice* 7: 258–72.
- Hogg RS. 2018. Understanding the HIV care continuum. *The Lancet HIV* 5: e269–70.
- Huffstetler HE, Bandara S, Bharali I *et al.* 2022. The impacts of donor transitions on health systems in middle-income countries: a scoping review. *Health Policy and Planning* 37: 1188–202.
- Ikilezi G, Augusto OJ, Dieleman JL, Sherr K, Lim SS. 2020. Effect of donor funding for immunization from Gavi and other development assistance channels on vaccine coverage: evidence from 120 low and middle income recipient countries. *Vaccine* 38: 588–96.
- Jakubowski A, Stearns SC, Kruk ME, Angeles G, Thirumurthy H. 2017. The US President's Malaria Initiative and under-5 child mortality in sub-Saharan Africa: a difference-in-differences analysis. *PLoS Medicine* 14: e1002319.
- Kaliel D, Knight C, Avery L *et al.* 2023. Midpoint reflections on USAID HIV local partner transition efforts. *Global Health: Science and Practice* 11: e2200338.
- Katz IT, Bogart LM, Cloete C *et al.* 2015. Understanding HIV-infected patients' experiences with PEPFAR-associated transitions at a Centre of Excellence in KwaZulu Natal, South Africa: a qualitative study. *AIDS Care* 27: 1298–303.
- Kavanagh MM, Dubula-Majola V. 2019. Policy change and micro-politics in global health aid: HIV in South Africa. *Health Policy and Planning* 34: 1–11.
- Kavanagh MM, Katz IT, Holmes CB. 2020. Reckoning with mortality: global health, HIV, and the politics of data. *The Lancet* 396: 288–90.
- Kentikelenis A, Rochford C. 2019. Power asymmetries in global governance for health: a conceptual framework for analyzing the political-economic determinants of health inequities. *Globalization and Health* 15: 1–10.
- Luboga SA, Stover B, Lim TW *et al.* 2016. Did PEPFAR investments result in health system strengthening? A retrospective longitudinal study measuring non-HIV health service utilization at the district level. *Health Policy and Planning* 31: 897–909.
- Mao W, McDade KK, Huffstetler HE *et al.* 2021. Transitioning from donor aid for health: perspectives of national stakeholders in Ghana. *BMJ Global Health* 6: e003896.
- Miles MB, Huberman AM, Huberman MA, Huberman M. 1994. *Qualitative data analysis: An expanded sourcebook*. Sage.
- OGAC. PEPFAR 3 0—Controlling the Epidemic: Delivering on the Promise of an AIDS-Free Generation. 2014. <https://reliefweb.int/report/world/pepfar-30-controlling-epidemic-delivering-promise-aids-free-generation>.
- Ogbuoji O, Mao W, Aryeetey G. 2021. The long-term impact of COVID-19 on development assistance for health is still uncertain. *The Lancet* 398: 1280–81.
- Paina L, Rodriguez DC, Zakumumpa H *et al.* 2023. Geographic prioritisation in Kenya and Uganda: a power analysis of donor transition. *BMJ Global Health* 8: e010499.
- Parkhurst J, Ghilardi L, Webster J, Snow RW, Lynch CA. 2021. Competing interests, clashing ideas and institutionalizing influence: insights into the political economy of malaria control from seven African countries. *Health Policy and Planning* 36: 35–44.
- PEPFAR. Uganda Country Operational Plan. 2018. <https://www.state.gov/wp-content/uploads/2019/08/Uganda-2.pdf>, accessed 14 November 2023.
- PEPFAR. Uganda Country Operational Plan. 2019. [https://www.state.gov/wp-content/uploads/2019/09/Uganda\\_COP19-Strategic-Directional-Summary\\_public.pdf](https://www.state.gov/wp-content/uploads/2019/09/Uganda_COP19-Strategic-Directional-Summary_public.pdf), accessed 14 November 2023.
- PEPFAR. Uganda Country Operational Plan. 2020. <https://www.state.gov/wp-content/uploads/2020/07/COP-2020-Uganda-SDS-FINAL.pdf>, accessed 14 November 2023.
- PEPFAR. Uganda Country Operational Plan. 2021. [https://www.state.gov/wp-content/uploads/2021/09/Uganda\\_SDS\\_Final-Public\\_Aug-13-2021.pdf](https://www.state.gov/wp-content/uploads/2021/09/Uganda_SDS_Final-Public_Aug-13-2021.pdf), accessed 14 November 2023.
- Pickbourn L, Ndikumana L. 2019. Does health aid reduce infant and child mortality from diarrhoea in sub-Saharan Africa? *The Journal of Development Studies* 55: 2212–31.
- Qiu M, Paina L, Rodriguez DC *et al.* 2021. Exploring perceived effects from loss of PEPFAR support for outreach in Kenya and Uganda. *Globalization and Health* 17: 1–14.
- RHITES-East. Regional Health Integration to Enhance Services in Eastern Uganda. <https://www.intrahealth.org/projects/regional-health-integration-enhance-services-eastern-uganda-rhites-east>, accessed 20 December 2022.
- RHITES-EC. Regional Health Integration to Enhance Services in East Central Uganda Activity. <https://www.urc-chs.com/projects/rhites-ec/>, accessed 20 December 2022.
- Rodriguez DC, Mohan D, Mackenzie C *et al.* 2021. Effects of transition on HIV and non-HIV services and health systems in Kenya: a mixed methods evaluation of donor transition. *BMC Health Services Research* 21: 1–17.
- Rodriguez DC, Tripathi V, Bohren M *et al.* 2015. “From me to HIV”: a case study of the community experience of donor transition of health programs. *BMC Infectious Diseases* 15: 1–12.
- Scheirer MA, Dearing JW. 2011. An agenda for research on the sustainability of public health programs. *American Journal of Public Health* 101: 2059–67.
- Serbanescu F, Clark TA, Goodwin MM *et al.* 2019. Impact of the saving mothers, giving life approach on decreasing maternal and perinatal deaths in Uganda and Zambia. *Global Health: Science and Practice* 7: S27–47.
- Serbanescu F, Goldberg HI, Danel I *et al.* 2017. Rapid reduction of maternal mortality in Uganda and Zambia through the saving mothers, giving life initiative: results of year 1 evaluation. *BMC Pregnancy and Childbirth* 17: 1–14.
- Shroff ZC, Sparkes S, Skarphedinsdottir M, Hanson K. 2022. Rethinking external assistance for health. *Health Policy and Planning* 37: 932–34.
- Snow RW, Okiro EA, Gething PW, Atun R, Hay SI. 2010. Equity and adequacy of international donor assistance for global malaria control: an analysis of populations at risk and external funding commitments. *The Lancet* 376: 1409–16.
- UAC. 2021. *Facts on HIV/AIDS in Uganda as at December 2020*. Uganda AIDS Commission. <https://uac.go.ug/media/attachments/2021/09/13/final-2021-hiv-aids-factsheet.pdf>, accessed 29 January 2022.
- USAID. 2021. *PEPFAR in Africa: Expanded Use of Local Partners but Should Reassess Local Partner Capacity to Meet Funding Goals*. Office of the Inspector General. <https://oig.usaid.gov/sites/default/files/2021-12/4-936-22-001-P.pdf>, accessed 30 December 2022.
- Vogus A, Graff K. 2015. PEPFAR transitions to country ownership: review of past donor transitions and application of lessons learned

- to the Eastern Caribbean. *Global Health: Science and Practice* 3: 274–86.
- Walt G, Gilson L. 1994. Reforming the health sector in developing countries: the central role of policy analysis. *Health Policy and Planning* 9: 353–70.
- Wilhelm JA, Qiu M, Paina L *et al.* 2019. The impact of PEPFAR transition on HIV service delivery at health facilities in Uganda. *PLoS One* 14: e0223426.
- Wiltsey Stirman S, Kimberly J, Cook N *et al.* 2012. The sustainability of new programs and innovations: a review of the empirical literature and recommendations for future research *Implementation Science* 7: 1–19.
- Zakumumpa H, Bennett S, Ssengooba F. 2017. Alternative financing mechanisms for ART programs in health facilities in Uganda: a mixed-methods approach. *BMC Health Services Research* 17: 1–11.
- Zakumumpa H, Kitutu FE, Ndagije HB *et al.* 2021a. Provider perspectives on the acceptability and tolerability of dolutegravir-based antiretroviral therapy after national roll-out in Uganda: a qualitative study. *BMC Infectious Diseases* 21: 1–13.
- Zakumumpa H, Makobu K, Ntawiha W, Maniple E, Torpey K. 2021b. A mixed-methods evaluation of the uptake of novel differentiated ART delivery models in a national sample of health facilities in Uganda. *PLoS One* 16: e0254214.
- Zakumumpa H, Paina L, Wilhelm J *et al.* 2021c. The impact of loss of PEPFAR support on HIV services at health facilities in low-burden districts in Uganda. *BMC Health Services Research* 21: 1–12.