What impact do Global Health Initiatives (GHIs) have on human resources for anti-retroviral treatment (ART) roll-out? A qualitative policy analysis of implementation processes in Zambia

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Abstract

Background: Since the 2000s development assistance for HIV and AIDS has increasingly been provided through Global Health Initiatives (GHIs), specifically the US Presidential Emergency Plan for AIDS Relief (PEPFAR), the Global Fund to Fight HIV TB and Malaria and the World Bank Multi-country AIDS Programme. Zambia, like many of the countries heavily affected by HIV and AIDS in Southern Africa also faces a shortage of human resource for health. The country is receiving significant amounts of funding from GHIs for the large scale provision of antiretroviral treatment through the public and private sector. This paper examines the impact of GHIs on human resources for ART roll–out in Zambia, at national level, in one province and two districts.

Methods: It is a qualitative policy analysis relying on in-depth interviews with more than ninety policymakers and implementers at all levels.

Results: Findings show that while GHIs do not provide significant funding for additional human resources their interventions have significant impact on human resources for health at all levels. While GHIs successfully retrain a large number of health workers, evidence suggests that GHIs actively deplete the pool of skilled human resources for health by recruiting public sector staff to work for GHI funded non governmental implementing agencies. The secondment of GHI staff into public sector facilities, may help alleviate immediate staff shortages but this practice risks undermining sustainability of programmes. GHI supported programmes and initiatives add significantly to the workload of existing public sector staff at all levels, while incentives including ‘salary top-ups’ and overtime payments mean ART programmes are more popular amongst staff than services for non-focal diseases.
**Conclusions:** Research findings suggest that GHIs need to actively mediate against the potentially negative consequences of their funding on human resources for health. Evidence presented highlights the need for new strategies that integrate retraining of existing staff with longer-term staff development to ensure staff retention. The study results show GHIs need to provide significant new and longer-term funding for additional human resources to avoid negative consequences on the overall provision of health care services, and ensure sustainability and quality of programmes they support.
1) Background

There is a shortage of human resources for health throughout sub-Saharan Africa[1]. Many countries in the region are also experiencing significant HIV epidemics, with an estimated 2.120,000 people needing anti-retroviral medicines [2]. The lack of adequate human resources for health directly impacts on countries’ ability to provide anti-retroviral treatment to its population [3]. The disease burden of HIV and HIV-related mortality amongst health sector staff has further reduced human resources [4], at a time when the introduction of anti-retroviral treatment in the public health system has substantively increased the workload of staff [5] and created an urgent need for additional human resources [6, 7].

Strategies to address human resource deficits have centred around staff retention (through incentives such as allowances, salary top-ups, and better working conditions) and retraining, including ‘shifting’ as many ‘tasks’ as possible away from doctors, nurses and pharmacists to non-clinical staff, enabling them to concentrate on their specific areas of expertise [3, 5, 7]. In Malawi for example, where special attention has focused on addressing the shortage of human resources for health, all health sector workers have received a salary top-up to increase staff motivation, financed by funding provided to the Malawian Ministry of Health [8].

Many of the countries heavily affected by HIV and AIDS, which are facing a human resource crisis are receiving large amounts of donor funding, including support for the large scale provision of antiretroviral treatment through the public and private
sector. Since the 2000s development assistance for HIV and AIDS has increasingly been provided through partnerships and Global Health Initiatives (GHIs), specifically the US Presidential Emergency Plan for AIDS Relief (PEPFAR), the Global Fund to Fight HIV TB and Malaria and the World Bank Multi-country AIDS Programme [9].

Yet evidence of the impact GHIs’ programmes have on human resources at country level, especially at sub-national level is limited. However, some studies have examined their impact in Ethiopia [10], and in Uganda, Mozambique and Zambia [11, 12], and research findings are forthcoming from studies in Malawi and other countries [13].

This paper examines the impact of GHIs on human resources for ART roll-out in Zambia, at national, province and at micro level in two districts. Focus is on GHI’s ability to contribute to ‘retain and retrain’ staff, and also on non-intended consequences of their programmes on human resources for health.

2) Methods

The paper draws on more than ninety in-depth interviews with policymakers and implementers at national and sub-national level, engaged in processes governing the implementation of ART roll-out. Actors interviewed include national, provincial and district representatives from government institutions, the donor community, governmental and non-governmental service providers, doctors and nurses, NGOs
supporting the roll-out, programme managers, community workers and networks of people living with HIV/AIDS. Interviews were conducted in Zambia between August and December 2007, as part of wider, comparative research on policy processes relating to the implementation of ARV roll-out at national, provincial and district level. Interviews were conducted at national level, as well as at provincial level in one province, and district level research was conducted in two districts within the focus province. Interviewees were selected based on a ‘snowballing’ process originating from an in-country advisory panel, made up on academics, representatives of non-governmental organisation, a Zambian clinician, and a representative from a network of people living with HIV/AIDS.

Interviews were semi-structured using an interview guide that was tested and revised in consultation with the in-country advisory panel. Actors were interviewed about their perception of implementation processes relating to ART roll-out, as well as their role and personal history in relation to these processes. Where permission was granted interviews were recorded and transcribed, otherwise extensive notes were taken. A subset of 32 interviews were selected for this paper where interview content focused on both GHIs and human resources. Interviews were analysed to identify five key themes identified - training, ‘top-ups’, mentoring, coordination and recruitment of staff. The research conducted is qualitative, so relies on, and is limited to, the perceptions of people interviewed at national level, in one province and two districts, who are working in the ART roll-out and interacting with GHIs regularly in their work. To better understand the perceptions of actors at different levels, the results and discussion section highlight at which level - ‘national’, ‘province’, or ‘district’ – interviewees operate.

Where possible the paper draws on available secondary research and data on human resources obtained by the authors during the research, allowing for validation
of data collected. Given the recent, unfolding nature of the ART roll-out, and the little secondary data available, this paper provides an empirical, contemporary spotlight on an under-researched and changing area. The research for this paper was conducted as part of a ‘twinning’ project between a Zambian and UK researcher. Ethical clearance for the research was granted by the ethics committees of the University of Zambia and the London School of Hygiene and Tropical Medicine.

3) Results and discussion

a) Human resources for health in Zambia

Zambia faces a severe shortage in human resources, exacerbated by the country’s HIV epidemic - an estimated 1.2 million (17%) of Zambians are currently living with the virus - with less than a third of the recommended doctor-patient ratio [14] to treat the population. The shortage of human resources for health, however, is not limited, or worst amongst doctors. The greatest need is for laboratory technicians, followed by pharmacists, doctors, nurses and data monitors [Interview, national level November 2007]. Other problems have also been identified. For example, there is a rapid turnover of staff, and high staff absenteeism [15] and an unequal distribution of staff between rural and urban areas [16, 17]. Ministry of Health data revealed that in 2006, 368 staff joined the public health sector, while 380 left the sector, highlighting a continued loss [15]. The main causes of attrition of health workers in 2004 were death, and workers resigning from the health service [16]. High vacancy rates of health posts throughout the public sector are well documented [14, 15].

The human resource crisis is particularly urgent in relation to the ART rollout, given the complexity of ART. Medicines need to be taken daily for the remainder of a
persons life, patients need to be initiated on the medication and reviewed on a regular basis by a doctor. Patients are also counselled by either a lay counsellor or a nurse on the importance of adherence and a healthy lifestyle, while drugs need to be ordered and administered by a pharmacist. Despite the constraints Zambia has had remarkable success in scaling up access to ART in the public sector. Between 2003 and the end of 2007 more than 130,000 people were initiated on antiretrovirals out of 250,000-300,000 who are estimated to need such medication [Interview national level; October 2007].

To address the shortfalls in human resources the Zambian government developed a specific human resources strategy in 2005, which has since received support from different funders. However, at the time this research was conducted the only targeted human resource intervention receiving donor support, including through PEPFAR funding, was the ‘rural retention scheme’. This includes incentives to attract doctors into rural areas, including better housing, a car and a cash allowance [14].

i) GHIs in Zambia

Zambia receives significant amounts of funding for HIV programme from three Global health Initiatives: the US Presidential Emergency Plan For AIDS Relief (PEPFAR), the Global Fund to Fight AIDS TB and Malaria, and the World Bank Multi-country AIDS Programme (MAP). In 2006 PEPFAR money alone made up 63 percent of all funding for HIV in Zambia [18]. This was in addition to resources for HIV from the World Bank MAP and the Global Fund.
However, mapping the flow of funding provided by individual GHIs in support for the public ART treatment programme is difficult[19]. This is in part because much of the funding supporting public sector programmes is channelled through NGOs or other private institutions and not directly to the government. A recent study for example, revealed that less than 5% of all PEPFAR funding for Zambia in 2005, was received by the government [19]. In some cases it is difficult to differentiate expenditure between intervention areas, such as treatment, prevention or care. Data on actual expenditure, i.e. funding disbursed to recipients at a country level is also not easy to obtain, as for example PEPFAR and the World Bank MAP do not publicly share this information [18].

Despite the limitations in detailed information, broad information on funding was obtained. Interviews with key stakeholders confirmed the majority of funding for treatment roll-out in the public sector is through GHIs, even if this is provided in form of technical support and not direct funding to the government. Using recent planning documents, a MoH official responsible for planning the ART roll-out for 2008 09 expected ’50-52% of funding from PEPFAR, 34% from the Global Fund and 10-15% or so from other sources’ [Interview, national level, November 2007].

PEPFAR funding is not allocated through the Ministry of Health but instead to US and national sub-recipients who then provide a range of support for prevention, care and treatment to facility, district and provincial level. PEPFAR sub-recipients are mainly NGOs, (but also academic, private sector and government institutions) and, as they essentially ‘implement’ the PEPFAR programme, they are also referred to as
PEPFAR implementers. The impact and forms of this support on human resources, specifically support provided for treatment roll-out, are explored later.

The World Bank MAP grant, while in part envisaged to support the Ministry of Health’s procurement of ART [20], in practice supported other elements of the programme including laboratory supplies [Interview, national level, November 2007]; [18]. Global Fund resources are directly received by the Ministry of Health and at the time of conducting this research were paying for the actual ARV medication.

b) The study focus province and district

The shortage of human resources for health was evident in the two study districts. At the time of conducting this research, six public sector clinics in one of the focus districts provided treatment to a population of 363,734 (GRZ 2000) with staff of three doctors, one pharmacist, and a changing number of technical (also called clinical) officers and nurses. While in the second focus district with a population of about 450,000 people, two doctors rotated between five clinics providing ART. Since 2004 more than 4000 people started ART in each of the two districts, in clinics run by the district, with no additional staff provided by the Ministry of Health for these services.

In the study focus districts and province, public sector roll-out of ART was supported by one PEPFAR implementing agency, while additional PEPFAR support was provided for a private hospital in one of the districts. Funding to the Ministry of Health for actual medication and laboratory equipment aside, World Bank MAP and Global Fund support in the study districts and province focused on non clinical interventions. In terms of supporting the clinical treatment roll-out at sub-national level, PEPFAR
implementers emerged as the most visible presence during the period of this research.

c) GHI's addressing human resources for health shortage

While GHIs do not provide direct financial support for additional human resources in the public sector, their programmes address the shortage in human resources through training for health care workers and volunteers on all aspects required to support the treatment programmes. They also provide allowances such as overtime payments, ‘top-ups’, or payments of expenses, especially for volunteer counsellors or treatment support workers.

PEPFAR funded programmes also provide ongoing ‘mentoring’ or ‘technical support’ in health facilities. This refers to clinical staff employed by a PEPFAR implementing organisation who support health facilities, such as clinics or hospitals on a regular basis (for example through visits about once a week) to discuss issues relating to the treatment programme. They assist with questions relating to clinical management of patients. The exact models for technical support vary. Some PEPFAR organisations have staff based at provincial level, others send ‘support teams’ from the capital on a regular basis.

In addition, PEPFAR implementers pay for, or second, data entry clerks into health facilities they support. These clerks capture how many people are receiving ART.
Data is reported both to the Ministry of Health and PEPFAR. Similarly, clinical care specialists have been employed by a PEPFAR-funded organisation and seconded to the provincial health directorates in each of Zambia’s nine provinces.

While each of these interventions aims to alleviate the human resource shortage in relation to ART, examining their impact at district and provincial level in detail suggest possible negative, unintended consequences. The following discusses each of these interventions in turn, based on the evidence emerging from interviews with key stakeholders.

i) ‘Top-ups’ – the impact of incentives for health workers in ART delivery

PEPFAR implementing organisations provide ‘top-ups’ to public health care workers and community volunteers working on the ART programmes they support. ‘Top-ups’ are either overtime payments for shifts worked in the ART clinic or transport costs for meetings for those working on PEPFAR funded health programmes. These incentives go a long way in motivating public health workers to work in the ART clinic. All nurses interviewed as part of this research confirmed that amongst their colleagues the ART clinic is the most popular [Interviews district level, October and November 2007], and their enthusiasm was echoed by the observations of policymakers that ARV clinics or programmes are liked by staff. While this suggests that ‘top ups’ are successful in motivating staff to work on the ART programme, it raises concerns about possible unintended consequences. A recent study conducted
amongst health care workers in three Zambian districts found that on average only
seven percent of health workers who had delivered non-HIV services had received
incentives, underlining the clear financial benefits arising from involvement in ART
delivery and causing imbalances between different parts of the service [11].

Some interviewees were concerned about distorting effect of such payments,
diverging attention and resources from non focal diseases [Interview, national level,
October 2007]. Evidence collected was not clear on whether this is the case or not in
the day to day delivery of services at health facility level. However, policymakers and
planners interviewed at national level felt strongly that their work had focused largely
on HIV and related diseases, to the neglect of other equally urgent health issues.
This may possibly be a reflection of the time and attention devoted at that level to
coordination of these activities. One senior ministry of health official observed, “HIV,
TB and malaria have taken almost 90% of our time not to mention that they have also
taken most of our budgetary money to the extent that we have actually neglected
what we call non-communicable diseases.” [Interview, national level, October 2007].

The provision of short-term incentives like ‘top-ups’ may also have implications for
sustainability, including quality of care. Speaking about the effect on the quality of
care in the longer term, a senior ministry of health official explained “They [donors]
support short term incentives […] but those are highly unsustainable because they
are applied for a year. You put so many people on treatment because you are
providing services to the health worker then the following year, there is nothing …”
[Interview, national level November 2007]. What this official points to is the effect of
the one-year funding cycle of PEPFAR, which means that incentives cannot be
guaranteed beyond that timeframe, which may create resentment amongst existing staff members, who narrowly miss out on receiving top-ups or change their performance from year to year. There may also be negative impact on long-term quality of care if top-ups are withdrawn after a year, and this underlines concerns about sustainability of the programmes. An advisor to the ministry of health said, “they [GHIs] are going to leave everything flat when they leave.” [Interview, national level, November 2007].

This suggests that while ‘top-ups’ or incentives are successful in motivating existing health care workers to work in the ARV clinics, they may have negative immediate consequences on attention paid to the quality of care provided to non-focal diseases. This echoes findings on the impact of top-ups by Ooman et al [12]. As ‘top-ups’ are not sustainable beyond the period funded by a GHI, it also raises concerns about the ability to sustain quality of care for patients in the longer-term.

ii) Training and mentoring of health care workers for ART provision in Zambia

One of the key GHI elements of support is training for health care workers. A clinician from a PEPFAR implementing organisation described their strategy “we put money into doing additional training for clinical officers, medical officers…and if their sites are growing rapidly and they need additional training, the team goes and assesses the needed training” [Interview national level, October 2007].
The training helps build capacity of health care workers involved at different levels in the provision of ART. However, health care workers often leave the public sector or their position once trained. All PEPFAR implementing agencies supporting the ART roll-out in Zambia described this as a common experience and a key challenge. A senior district health official replied when asked about the greatest challenge faced in implementing the ART roll-out ‘human resources […] you train people to provide this and within a short time they have left. So you need to find people to continue providing the service. That has been a major challenge in terms of implementing…’[Interview, district level, September 2007]. The very fast turn over of staff once trained suggests that external training, in isolation of increased resources to enable career progression and longer term incentives in the public sector, has little effect in alleviating the shortages of skilled health care workers to support the provision of ART.

In addition, training, especially the per-diems provided during such trainings are part of the reasons that attract health workers to work on the ART programme, adding to the potentially distorting effects of top-ups. A further consequence of training being externally conducted, means that these are short term intensive courses that take clinicians out of their clinic, imposing a further strain on the day-to-day running of the ART programme.

iii) Mentoring and the ‘secondment’ of GHI staff into the public sector
In addition to training, the PEPFAR implementing organisations in Zambia supporting ART roll-out provide on-going technical support through ‘mentoring’ of health care workers. This involves visiting ART sites and attending to patients together with health care staff, to monitor the quality of services and assist with difficult clinical cases. Some organisations have teams of specialists, ranging from clinical care to pharmacy, nursing and logistical support, who visit the clinics and hospitals supported by their organisation on a monthly or weekly basis.

In some cases technical support is provided through staff that are recruited and employed by a PEPFAR implementing agency and seconded into the public health sector, where they work alongside their public sector colleagues. An example of this practice is the PEPFAR-funded Health Services and Systems Programme (HSSP), aimed at providing technical support to the Ministry of Health. It focuses on aspects relating to the health systems and human resources. As part of its support HSSP recruited and seconded clinical care specialists to each of Zambia’s nine provincial health directorates, to provide technical support to the districts and hospitals in the delivery of ART services [Abt Associates 2007]. These clinical care specialists work in the provincial health directorate alongside a clinical care specialist employed by the Ministry of Health, but receive a higher salary. While part of the provincial health team, they also have access to a small operational budget for training and on-going support [Interview national level October 2007]. All nine clinical care specialists employed by HSSP are medical doctors, whereas the government’s counterparts are nurses or technical or clinical officers (a three – year diploma certified degree in Zambia that allows clinical practice).
While these clinical care specialists are additional to the provincial team, and undoubtedly contribute through their skills and commitment, given the salary level and remit, these posts are not sustainable beyond HSSP funding. In addition, their relative seniority respective to the government’s clinical care specialists raises questions about working (and status) relationships that may affect, both positively and negatively the implementation of services. Some national actors reported that the clinical care specialists had led to an increase in capacity, while implementers at provincial and district level reported that their engagement may have led to de-motivation of government staff. In addition, interviews suggested that nurses and technical officers at district level referred to the MoH clinical care specialist, whereas doctors worked with the HSSP employed clinical care specialist.

iv) Increasing workload through coordination

Despite efforts at national level to coordinate activities between the different implementing partners and the Zambian government through a range of bodies, including technical committees who determine a geographic and skills based ‘division of labour’, policymakers interviewed mentioned that coordination with individual organisations, remained problematic. A senior official at the Ministry of Health said: ‘In Lusaka alone there are close to 236 partners working on HIV […] to track what they are doing is a challenge.’ [Interview, national level, November 2007] When describing the coordination, another Ministry of Health official said ‘…it is overwhelming, there is a lot that needs to be done and sometimes I feel as if am doing injustice to some of the activities.’ [Interview, national level, November 2007]
There is clear evidence, from the data collected and other research focusing on human resources and ART, that workload for staff has increased since the introduction of ART [4]. In one study district the same number of doctors and nurses as in 2004 (before district provision of ART) were providing treatment and care to more than 4000 patients on ART by the end of 2007 [Interview, district level, October 2007]. As previously highlighted, the district staffing levels at the time of conducting this research were two and three doctors in clinical care respectively in the focus districts, and approximately ten members of staff at the provincial health administration. Health care workers interviewed described their workload had not only increased due to a greater number of patients, but due to coordination of activities funded or implemented by GHIs.

At province and district level, the coordination with PEPFAR implementers posed an additional workload for health sector staff due to funding requirements. Districts supported by PEPFAR in their roll-out were required to provide monthly reports to the provincial office of the PEPFAR implementer. These were in addition to quarterly reports that form part of the Ministry of Health processes, and the MoH’s twice annual performance reviews.

To stream-line the process and avoid confusion each district in the province had appointed a ‘focal person’ to interact with PEPFAR implementers [Interview, district level, October and November 2007]. Focal persons were drawn from amongst doctors, nurses and clinical officers working at the district level.
PEPFAR implementers held quarterly meetings with supported districts to review activities. In addition, PEPFAR implementers supported the district teams to have further regular meetings, to either coordinate with other stakeholders such as NGOs, or to discuss issues of clinical management. While PEPFAR implementers provided resources for these meetings, their organisation and arrangements are the responsibility of the district focal person, in addition to his or her clinical workload. The rationale for making this a district responsibility was to ensure the district managed the programmes in an integrated way. However, there were opportunity costs to district staff – such as time. Meetings tended to last a whole working day. As one district staff pointed out, “our work has increased, like when it comes to meetings, I have to write the memos, to contact people…we have about three meetings in a month-clinical meeting, quarterly review meeting and the quarterly referral meeting which usually take the whole day…” [Interview, district level, November 2007].

Many new initiatives instigated and supported by GHIs, including through financial resources for trainings and materials have to be implemented at existing staff level. An example of this is the introduction of ART site accreditation introduced with the technical assistance of a local PEPFAR implementer who helped develop a standard set of indicators against which to assess sites’ readiness to be accredited to have minimum requirements in place, for the provision of ART. The Zambian Medical Council has been designated to oversee the process, receiving a minimal budget for overseeing and facilitating the accreditation process, by use of existing funds for monitoring and evaluation [Interview, national level November 2008]. At provincial level, the accreditation of sites, which involves a site visit and assessment, is conducted through ‘teams’ that draw on existing provincial health administration staff.
(ten people) and medical practitioners from the provincial hospitals. By mid 2007, more than thirty sites were already providing ART in the focus province, and as accreditation of sites was introduced several years after the start of the public sector ART programme, needed to be assessed. This was in addition to any new sites for ART roll-out [Interview district level, October 2007]. Accreditation requires a site visit and assessment. Given staffing levels, with no additional human resources available for the accreditation processes these were understandably delayed [Interview national level, November 2008]. While site accreditation is undoubtedly an important element of quality assurance, the way in which this was introduced, and its implementation envisaged, shows the limitations of such initiatives in the absence of additional funding for human resources.

This suggests that support by GHIs particularly PEPFAR implementers, is provided in form of training, and financial support for materials and meetings, for many new initiatives which may improve the ART programme, and ensure greater quality of care and treatment. Despite the clear benefits of the intended outcomes the lack of funding for additional human resources within the health sector adds significantly to the workload of already stretched human resources for health, risking further burn-out and ultimately contributing to making programme efforts less sustainable.

v) GHI’s recruiting

A further impact of GHIs on human resources for health is the actual recruitment of health workers from within the public sector, by the various implementing agencies of
GHIs, especially those funded through PEPFAR. This is particularly apparent in the support provided for a clinical intervention, such as the provision of ART roll-out where assistance, including training and mentoring, requires clinicians familiar with the Zambian health system.

Of fifteen health workers (including doctors, nurses and pharmacists) currently working for GHIs or their implementers that were interviewed for this study, nine had recently been recruited from the public sector. One senior Ministry of Health official described how PEPFAR agencies recruit government employees once they have gained experience, and then describe the government as lacking capacity: ‘It [PEPFAR] is strategically weakening government efforts’ […] what is happening is that we are training people […], next you will hear that he has been taken […] next you will hear that government, you have no capacity.’ [Interview, national level, December 2007]

Of the health workers involved in the two public sector sites that started ART in Zambia in 2002, (University Teaching Hospital, Lusaka and Ndola Central Hospital) including the doctors leading these programmes, the majority have now left the public sector to work for GHI funded organizations that support the roll-out of ART [Interviews, national level; September –November 2007]. It appears that GHIs by recruiting local health care workers to provide the technical support for ART are drawing precisely from and depleting the pool of the most qualified health workers in Zambia. These findings corroborate the practices observed in a three country study by Ooman et al[12].
4) Conclusions:

Global Health Initiatives have vastly expanded access to life-saving treatment for thousands of people in Zambia. Yet they are not effectively addressing the human resources for health shortages in their programmes supporting ART roll-out. Given the overall amount of their resources aimed at supporting of ART programmes, comparatively little is being done to address the health worker shortage. While some of their interventions, such as ‘top-ups’ for staff working on ART, secondment and training appear to alleviate staff shortages in the short term, and succeed in providing many health sector staff the opportunity to improve their knowledge and skills on HIV/AIDS through short term training, workshops and on-the job training, they appear less successful at staff retention. This echoes similar findings from three further districts in Zambia recently published [11].

GHIs' programmes have increased the workload of already stretched managers and health care providers. As the majority of GHIs, particularly PEPFAR, support treatment through individual organisations, such as NGOs, there is a significant added workload for public sector health staff who have to coordinate these support activities. This appears to be the case at all levels from national to district level, adding to potential problems of staff burn-out. The recruitment by GHIs of public sector health workers to work for GHI funded non-government implementers that support public sector roll-out, further reduces the human resources for health in the public sector in Zambia. It also raises concerns about the ethical dimension of this assistance, where instead of providing much needed resources to the government to increase human resources for health, development agencies use aid money to hire public sector workers to provide external assistance to the ART programme.
When recommending and supporting new policies, such as the site accreditation for ART, GHIs should conduct a human resource impact assessment and address the human resource need created by such interventions through additional funding that will allow the government to recruit the staff required to implement these through the public sector.

By not providing resources for the MoH to employ further human resources, but seconding these, as in the case of additional provincial clinical care specialists, additional capacity remains external and limited to the period of GHI funding available. The more Zambia’s treatment programme relies on mentoring and ‘seconded staff’ the less sustainable it becomes in the long term, creating greater dependence on GHIs to continuously fill these gaps in capacity. Different approaches, such as the model followed in Malawi, should be explored to avoid creating further dependence [8].

Similarly, as training is provided through external partners and not integrated into a longer-term strategy for developing the human resources and allowing individuals to progress professionally within the health system, there are limited incentives for health professionals to remain within the public health care system.

The impact of top-ups, increases staff motivation and interest in the ART programmes but may have a distorting effect on health services overall. There is concern that as staff move vertically towards the ART programme, quality of services
for non-focal diseases may suffer. In addition, the short term nature of funding cycles may mean a drop in quality of care for patients on ART once these payments are discontinued. More research is needed to assess the impact of top ups for disease specific programmes, on the overall provision of health care services.

These interventions, aimed at addressing the shortages in human resources for health, including top-ups, mentoring, secondment of staff and training, all appear ‘surgical’ in that they are not genuinely interwoven into the Zambian health system at all level. They could be removed or abandoned, leaving an almost hollowed-out treatment programme behind.

The evidence discussed in this paper - from interviews with Zambian health workers at all levels – from national Ministry of Health to districts and clinics - suggests that GHIs need to rethink the impact of their overall programmes, policies and conduct in relation to human resources for health. They need to address the long-term effect on quality of care and health systems of interventions targeted at alleviating staff shortages to avoid creating an ever growing dependency of the Zambian treatment programme on external actors.

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**Declaration of Interest:**

The authors declare no conflict of interest.

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