Case studies to investigate the process of delivering HIV self-testing services through five models of distribution in Zambia

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List of Acronyms

ART	Anti-retroviral therapy
CHW	Community health worker
EDC	Electronic data capture
FGDs	Focus Group Discussions
HIV	Human immunodeficiency virus
HIVST	HIV self-testing
HTS	HIV testing services
ID	Identity
IDIs	In-depth Interviews
LSHTM	London School of Hygiene and Tropical Medicine
PITC	Provider-initiated counselling and testing
PMTCT	Prevention of mother-to-child transmission
PopART	Population effects of Antiretroviral Therapy to reduce HIV transmission
PRA	Participatory Rapid Appraisal
SOP	Standard operating procedures
STAR	Self-testing for HIV in Africa
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNZA BREC	University of Zambia Biomedical Research Ethics Committee
VMMC	Voluntary medical male circumcision

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Principal Investigator Signature Page

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I, the Principal Investigator, agree to conduct this study in full accordance with the provisions of this protocol. I agree to maintain all study documentation for a minimum of seven years after the completion of the study or unless otherwise specified by UNITAID.
I have read and understand the information in this protocol and will ensure that all associates, colleagues, and employees assisting in the conduct of the study are informed about the obligations incurred by their contribution to the study.

_____
Name of Principal Investigator

_____ _____
Signature of Principal Investigator Date

Summary

To end the HIV epidemic by 2030, strategies are needed to reach undiagnosed HIV-positive individuals with treatment services and link HIV-negative individuals to available prevention services, including voluntary medical male circumcision (VMMC) and oral pre-exposure prophylaxis [1]. In Eastern and Southern Africa, the region with 50% of the burden of HIV, progress has been made in reaching the UNAIDS 90-90-90 targets, yet one-quarter of individuals living with HIV remain unaware of their HIV status [2]. Over the past decade, HIV testing services have evolved rapidly, from primarily facility-based service delivery to the widespread availability of community-based HIV testing strategies. These strategies have contributed to achieving the first 90 in many countries of the region, but there remain gaps in reaching men and younger people with HIV testing services.

HIV self-testing (HIVST) is a novel strategy to deliver HIV testing services that has the potential to fill the gap in the first 90 [2]. By virtue of providing more autonomy, flexibility and privacy about when and where to test for HIV, HIVST may reach the "hardest-to-reach" individuals. Since 2016, the World Health Organization has supported the implementation of evidenced-based strategies to deliver HIVST [2, 3]. HIVST is being included as part of the national HIV strategies and policies in a number of countries in the region [2]. In Zambia, where an estimated 66% of HIV-positive individuals are aware of their HIV status, [2] a trial of the door-to-door offer of HIVST as an option for how to test for HIV showed that the strategy can reach men and individuals previously not reached through an offer of home-based finger-prick HIV testing [4]. To support the development of HIVST guidelines, additional research is needed to understand how to deliver HIVST in different settings and for different populations.

The purpose of this study is to conduct an in-depth evaluation of the process of distributing HIVST through five models of HIVST distribution. The study aims to understand user and provider experiences of HIVST distribution, contextual factors that affect HIVST distribution, to measure the cost of distribution, and determine who is reached if the distribution model is to deliver an HIVST to an index individual for distribution to their partner (termed secondary distribution of HIVST). The HIVST distribution models that will be included in this case study include: VMMC clinics, public health facilities, community-led distribution through community structures such as small shops, and secondary distribution of HIVST through antenatal care (ANC) and HIV testing and treatment services.

The specific objectives of the study, for **al**l models of distribution, are to:

1. Describe, quantitatively, the process of distributing HIVST kits through each of the five distribution models;
2. Understand individuals' experiences of the different models of HIVST distribution;
3. Explore contextual factors likely to influence the implementation and acceptability of different models of HIVST distribution;
4. Evaluate the frequency and nature of social harms associated with distribution of HIVST kits;

5. Develop generalizable qualitative tools that can be used to evaluate different distribution models among key target populations;
6. Costs, from the patient and the provider-perspective, for providing and accessing HIVST kits;
7. The incremental cost-effectiveness of additional HIVST distribution models, and
8. Patient costs and their willingness-to-pay for HIVST models

To meet these objectives, the study will combine qualitative and quantitative data collection.

To measure the process of HIVST distribution, routinely collected programme data will be used to describe the number of HIVST kits distributed through each of the five distribution models. Qualitative data collection will complement quantitative data by providing insights into users and providers experiences (objective 2), and contextual factors that influenced distribution of HIVST through each of the five models (objective 3). Qualitative data collection methods will include focus group discussions (FGD), in-depth interviews (IDI), community consultations, physical and social mapping, observations and stakeholder discussions. These methods will also be used to document the emergence and management of social harms.
Economic evaluation methods will include document reviews and exit interviews with individuals accessing HIV testing services.

In the **two secondary distribution models**, the study will explore factors associated with successful secondary distribution of test kits. Specific objectives are to measure:

9. Factors associated with acceptance of HIVST for secondary distribution to index patients, acceptance being evidenced by accepting an HIVST kit(s) for onward secondary distribution.
10. Factors associated with the successful secondary distribution of HIVST to the sexual partners (the intended users of the secondary distribution HIVST kits) of index patients, as evidenced by the proportion of index patients who report that their primary partners used the HIVST kit within 1 month of distribution
11. The proportion of intended users of the secondary distribution HIVST kit who report having accessed confirmatory testing, or HIV prevention or care services within 3 months of distribution
12. User experiences and factors affecting the potential for social harms

To meet these objectives, we will administer a quantitative exit interview after the clinical consultation to determine the proportion of individuals who accepted an offer of an HIVST for secondary distribution and factors associated with acceptability of an offer of a secondary distribution HIVST (objective 9). For individuals who accepted the offer of a secondary distribution HIVST, we will conduct a follow-up questionnaire approximately 1-month after the initial exit interview to measure use of the HIVST kit (objective 10) and will follow-up their partner approximately 3-months after distribution to measure linkage to confirmatory testing, HIV care or prevention services (objective 11). To complement the quantitative data, a purposive sample of individuals participating in the exit interview will be followed-up at three-time points as part of a qualitative cohort, with IDI conducted each time point to understand

user experiences, factors influencing secondary distribution of an HIVST, and social harms (objective 12).

1. Background and Purpose of the Study

1.1 Background and rationale

Over the past decade, the delivery of HIV testing services (HTS) across southern Africa has evolved from solely facility-based to delivery of HTS through community-based settings, including community-based campaigns, mobile vans, and the door-to-door offer of home-based HIV testing from lay counsellors.[5] In many sub-Saharan African countries, this scale-up of HTS has led to an increase in the proportion of individuals ever-testing for HIV and receiving the result of an HIV test, and has contributed to progress in reaching the first-90 of the UNAIDS 90-90-90 targets.[6-9] In 2016 in eastern and southern Africa, an estimated 76% of individuals living with HIV knew their HIV-positive status, among whom 79% were on anti-retroviral therapy (ART) treatment.[2, 8] In 2016 in Zambia, 70% of women and 63% of men knew their HIV-positive status.[10] A similar percentage (~85%) of men and women who knew their HIV-positive status self-reported ART treatment use.[10] Relative to 2010, there was a 4% decline in HIV incidence in 2015 in eastern and southern Africa.[11]

Despite progress in the region towards the UNAIDS 90-90-90 targets, HIV incidence remains high among a number of sub-populations and there are critical gaps along the treatment cascade, with a third of individuals living with HIV remaining undiagnosed.[2, 8] To improve all steps in the HIV care continuum and link more people into HIV prevention services, including voluntary medical male circumcision (VMMC) and oral pre-exposure prophylaxis (PrEP), there remains a need to improve access to HTS in order to facilitate linkage to HIV prevention, or treatment and care services.[11] Among the populations hardest to reach with HTS are men, adolescents and younger adults, and populations with higher levels of mobility.

1.2 HIVST as a strategy to increase uptake of HIV testing services

Self-testing for HIV (HIVST) is an approach to delivering HTS that provides greater confidentiality and autonomy about where and when to test.[12] Studies have shown that HIVST is feasible, acceptable, can achieve a high level of accuracy with lay counsellor support for use,[4] and can reach partners of women attending health facilities.[13] Studies of secondary distribution of HIVST to the partners of women attending ANC or post-partum services and to female sex workers in Kenya have shown high reported use of HIVST by primary sexual partners.[14]

1.3 Regulatory developments relating to HIVST and their ethical considerations

Since 2016, the WHO endorsed HIVST as an additional approach to delivering HIV testing services (strong recommendation, moderate quality evidence) [3]. The recommendation, however, acknowledged the need for additional research on best practice for delivering HIVST services in different settings and for different populations [3]. In addition, the HIVST kit being used for implementation of the STAR (Self-testing for HIV in Africa) studies (an oral fluid, or mouth swab, test: OraQuick HIVST kit) was pre-qualified by WHO as suitable for use in low- and middle- income countries, based in part on clinical performance data provided by Zambart

in Zambia [4]. The OraQuick test is currently the only product with WHO pre-qualification for HIVST and has been approved for routine use in Zambia, with a country operational framework under development by the Zambian HIVST Technical Working Group. As such, OraQuick packaged for HIVST is no longer an investigational product, and promotion of HIVST with this product does not in itself require ethical approval.

1.4 Studies of HIVST distribution in Zambia

In addition to clinical performance studies, three cluster-randomised trials of community-based distribution have been conducted in Zambia. In one trial, conducted in four urban communities, we found that the door-to-door offer of HIVST as an option for HIV testing by lay counsellors, which included the option for individuals to take an HIVST for secondary distribution, reached men and younger adults.[15] The second trial, a cluster randomised trial of community-based distribution of HIVST is ongoing as part of STAR Phase I. A third trial among female sex workers, using peer educators and their clients as the unit of randomization, found that HIVST was acceptable, but did not address gaps in the care cascade among a population with high levels of HIV testing and linkage to care overall [16]. Findings arising from the completed HIVST trials, and other studies of HIVST in the region, have led to HIVST being adopted as a routine service delivery through health facilities in Zambia.

There remains, however, a need to understand the relative costs, benefits and harms associated with different models of delivery; whether different models of HIVST distribution are feasible, reach individuals, particularly men, previously unaware of their HIV status; and link individuals to HIV prevention or care services. In particular, there is a need for evidence of less labour-intensive and costly models of HIVST distribution. Numerous models of HISVT distribution are being tried in different settings. How these models are implemented in practice, how different models of distribution are experienced by intended users, and whether these models reach population subgroups underserved by available HTS all need to be understood to support decision-making around resource allocation for HIVST.

The starting point of the current study is, therefore, to use mixed-methods case studies to evaluate the costs and effects of five models of distribution on societal perspectives of HIV and testing for HIV. We will also evaluate the health worker perceptions of HIVST as a potential addition, but also a potential threat, to their delivery of HIV services. This collection of case studies will provide quantitative and qualitative evidence of the process of delivering HIVST services, understand who is reached through these models of HIVST distribution, particularly secondary distribution, and the experiences of individuals reached through these models.

1.5 Study Purpose

The purpose of this observational research study is to evaluate the process of delivering HIVST services through five promising models of HIVST distribution (Table 1). In this study, we will use a case study approach, combining qualitative, economic and quantitative data collection methods, to describe the process of distributing HIVST through each model, provide in-depth understanding of user and provider perspectives of each model, and the experiences of individuals accessing HIVST services. For models 4 and 5 (secondary distribution models), we

will recruit cohorts of individuals to evaluate how best to target secondary distribution of HIVST kit, to maximise uptake and linkage to confirmatory testing, HIV prevention and care services.

Across all models, we will develop approaches for anticipating, documenting and mitigating social harms, although these have proved to be rare in other HIVST distribution models [17, 18].

Table 1: Summary of HIVST distribution models

	Model	Description	Implementer
1	VMMC	VMMC mobilizers distribute HIVST to men interested in VMMC.	SFH
2	Facility-led and Community-led	The facility-led model will utilize existing clinics to distribute HIVST kits within specified departments of the facility and during outreach programs.	SFH Zambart and MOH
		HIVST kits will be distributed using existing community structures such as shops of hubs (kantembas) that are otherwise not directly linked to the health facilities. Communities will determine the best way to distribute the tests and manage all distribution activities.	SFH and Zambart
3	Workplace	Distribution of HIVST in targeted workplaces where HIV risk may be high (uniform/security professionals, truck drivers, taxi ranks etc.) and testing using routine finger-prick test is low or unsuccessful, HIVST distribution through peer educators or distribution agents. Distribution will be done in a private room or outside in a tent. Workers will walk in at their own time to collect an HIVST. Process data will be collected using a self-administered questionnaire. There will be no individual tracking for linkage to care and treatment.	SFH
4	Secondary Distribution through ANC	This model is part of the facility-led HIVST distribution model, above. HIVST for secondary distribution will be offered to women attending ANC for their primary partners.	SFH and MOH
5	Secondary distribution through individuals who know their HIV	Trained lay counsellors for Zambart models and SFH and MOH staff for models implemented by SFH will distribute HIVST through individual HIV+ patients. The lay counsellors will offer HIVST kits to HIV positive individuals who self-report to: be in a discordant	Zambart, MOH and SFH

positive status	relationship; to have a partner with unknown HIV positive status or to have HIV negative partner who wishes to re-test.

2. Study aim and objectives

2.1 Study aim

The overall aim of this study is to inform early scale-up and guideline development for approaches to distributing HIVST in Zambia through in-depth evaluation of five promising distribution models. The evaluation will use a mixed method approach using qualitative, economic and quantitative data.

The qualitative analysis will explore user and provider perspectives and experiences, and the contextual factors that affect the acceptability of HIVST and subsequent post-test services where HIVST are distributed through different approaches. Data on social harms and risk factors for social harms will also be explored.

The quantitative components of this study will include using routinely collected programmatic data to describe the process of HIVST distribution and, in the two secondary distribution models, recruitment of larger cohorts of index patients (attending ANC and HIV testing and treatment services). The cohorts will investigate who is reached through secondary distribution and evaluate the factors associated with a successful secondary distribution. The cohorts will allow us to measure the proportion of HIVST kit recipients who link to confirmatory testing, prevention or care services. Accuracy of secondary distribution HIVST kits will not be evaluated here but is being included in a parallel STAR study in Malawi.

The economic analysis will involve programmed expenditure review, complemented by field observations, to calculate the health systems costs. Field observations help in generating allocation factors across activities and shared resources as well as identifying associated economic costs of distributing HIVST. We also conduct interviews with testers, including potential testers, to assess patient's costs of accessing HIV services as well as their willingness to pay for HIVST. We also conduct interviews with distributors, for community-led models, to assess their willingness to accept distribution of the kits.

2.2 Study objectives

For each of the five distribution models, the specific objectives are to use routinely collect programmatic data and qualitative data from the case studies to:

1. Describe, quantitatively, the process of distributing HIVST kits through each of the five distribution models;
2. Understand individuals' experiences of the different models of HIVST distribution;
3. Explore contextual factors likely to influence the acceptability of different models of HIVST to direct and secondary-distribution kit recipients. For example, at community level we will explore how availability of alternative HTS, anticipated and enacted stigma, and location of the distribution models influence people's choices. At interpersonal level, we will explore how power dynamics within a couple influence individuals' decisions.

4. Evaluate the frequency and nature of social harms associated with distribution of HIVST kits, and
5. Develop generalizable qualitative tools that can be used to evaluate different distribution models among key target populations

For four of the five models (all models except VMMC) we will also measure:

6. Costs, from the patient and the provider-perspective, of accessing and delivering HIVST kits, and those relating to linkage into confirmatory testing and care for individuals who self-test HIV-positive
7. The incremental cost-effectiveness of additional HIVST distribution models
8. Patient costs and their willingness-to-pay for HIVST

For the two secondary distribution models (implemented in ANC and HIV testing and treatment services), we will recruit a cohort (Secondary Distribution cohort) of index patients and their sexual partners (intended users of the HIVST kit) in order to investigate:

9. Factors associated with acceptance of HIVST for secondary distribution to index patients, with acceptance evidenced by accepting an HIVST kit(s) for onward secondary distribution.
10. Factors associated with the successful secondary distribution of HIVST to the sexual partners (the intended users of the secondary distribution HIVST kits) of index patients, as evidenced by the proportion of index patients who report that their primary partners used the HIVST kit within approximately 1-month of distribution
11. The proportion of intended users of the secondary distribution HIVST kit who report having accessed confirmatory testing, or HIV prevention or care services within approximately 3-months of distribution
12. User experiences and factors affecting the potential for social harms

2.3 Rationale for study design

This study will adopt a case study approach. Case studies are appropriate for illuminating decisions, including why decisions were taken, how they were implemented and what the consequences were. Case studies are also the preferred method for 'how' and 'why' questions [19, 20]. The study will include predominantly qualitative data collection methods, including community consultations, observations, FGDs and IDIs. However, the study will also include collection of quantitative process data and recruitment of a cohort to better evaluate the two models of secondary distribution.

3. Roles and responsibilities for implementation

This research protocol focuses on the research activities being carried out by trained researchers at Zambart. The distribution of HIVST will not be done by the research team, rather by separate teams of implementers and Ministry of Health (MOH) staff. Society for Family Health (SFH) and MOH will lead the implementation of the four models of HIVST kit distribution in the second phase of the STAR initiative, with Zambart leading implementation of one model and responsible for all research activities.

Table 1 summarises the distribution models for which case studies are planned, see also appendix 1 for a more detailed description of the models.

1. The distribution of HIVST will include the following inputs, from SFH and/or Zambart: Training of an existing cadre of health care workers (employed by MOH), CHiPs or SFH distributors on how to offer HIVST to individuals, including for secondary distribution. This will include training on basic HIV information, HIVST information (how to demonstrate the use of HIVST and read the results), HIV related social harms, services available for individuals who experience social harms and process of linking such individuals to organisations that offer help.
2. Coordinating with MoH during the implementation period and ensuring that HIVST kits are distributed in line with the Zambian HIV testing guidelines.
3. Distribution of HVST kits in the MoH health facilities and the catchment area of the facility.
4. Collection of basic process data information during HIVST distribution.
5. Promotion and social marketing of HIVST (led by SFH) through different channels, including fliers, posters and drama performances in the community. Public address systems will also be used to create awareness about HIVST.
6. For the workplace model, SFH will seek permission from senior management personal in charge of the workplace. SFH will also negotiate for time and a private room or space to distribute HIVST kits to the workers.

The main role of Zambart will be to conduct research activities to evaluate the five models of HIVST distribution. Individuals will come in contact with the researcher after they have been offered an HIVST kit and whether they accept or not.

All individuals, regardless of whether they take an HIVST kit for primary or secondary distribution, will be informed of the follow-up services available to them and their partners (if applicable) at the health facility. Individuals will be informed that the HIVST is a screening test, such that if the test is reactive they will need to attend the health facility for confirmatory testing. Confirmatory testing will be conducted using Determine HIV™ and SD Bioline™ in line with Zambian HIV testing guidelines [3]. Individuals will also be informed that a non-reactive test does not require any confirmatory testing, but that they should return to the health facility to link to prevention services, including VMMC or to obtain a supply of condoms.

For the secondary distribution models, staff training will include additional steps to ensure that index patients understand how to demonstrate the use of the HIVST to their partner, and to communicate the next steps to be followed for a reactive or non-reactive result. SFH distributors will request that index patients collecting a secondary distribution HIVST kit for their partners to inform their partner about the availability of HIV-related follow-up services, including confirmatory testing where the HIVST is reactive.

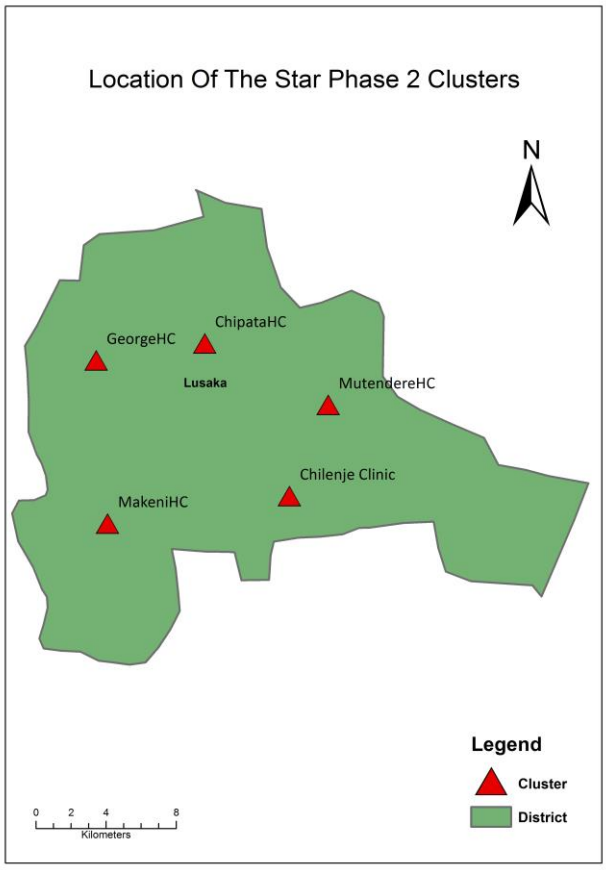
4. Methods

4.1 Study population and location

The study population will include individuals aged 16 years or older (the age of consent for HIV testing in Zambia), who access health facility services where HIVST kits are being distributed. The study location is five peri-urban communities in Lusaka, Zambia. These communities vary in population size from 41,825 to 106,000 individuals. In each of the communities, the facility-led model will be implemented in the public health facility and the community-led model will be implemented in all facility catchment areas. Facility-level distribution will utilize the existing systems of service delivery. Distribution of HIVST will be done within the facility and during outreach programs. The VMMC model will target potential VMMC clients within the communities surrounding the clinic during facility-led outreach activities.

The selection criteria of the communities included having a health facility that offers HIV ST services, presence of an ART clinic and a catchment population size of more >40,000. (Figure 1).

Figure 1. Map indicating location of study sites



SFH intends to distribute HIVST through workplaces such as the banks, mobile phone providers, mines, governmental and quasi-governmental organisations, manufacturing companies and others. These workplaces may not be located in the five communities. The SFH

team is currently mapping and assessing the workplaces where HIVST distribution will be done. For this study, we will conveniently and purposively sample two workplaces from those where SFH will distribute HIVST.

Table 2: Summary of data collection methods for all distribution models

Case study number	Model of HIVST distribution	Data collection method			Participants and recruitment
		Quantitative	**Qualitative**	**Economic**	
1	VMMC	Process data	Community consultations Physical/social community maps and 4 stakeholder discussions 18 IDIs & 3 FGDs with approx. 140 participants Observations	N/A, already costed	VMMC clients aged 16 years and above (1 FGD, 6 IDI)
2	Facility- and community-led			Document reviews and process data Observations such as time and motion. Costing data abstraction sheet	All individuals of the general population aged 16 years and above (2 FGDs, 6 IDI)
3	Workplace				All individuals aged 16 years and above (1 FGD, 6 IDI) 4 community stakeholder meetings
4	Secondary distribution through ANC	Process data Quantitative cohort with approximately 450 individuals per cohort (900 total)	As above plus Observations Qualitative cohort of 12 participants selected from ANC & HIV testing and treatment services (24 IDI). 8 FGDs with community members/ ANC and ART clients for community perspectives on secondary	Exit interviews Quantitative cohort Document reviews and process data Observations such as time and motion. Costing data abstraction sheet Discussion with providers	Exit Interviews/quantitative cohort- consecutive clients offered HIVST for secondary distribution (approximately 450) Primary partners of cohort who were offered HIVST. 12 individuals purposively selected for qualitative cohort (IDIs) 4 FGDs; 2 IDIs with HCWs
5	Secondary distribution through				Exit Interviews/quantitative cohort - consecutive

Case study number	Model of HIVST distribution	Data collection method			Participants and recruitment
		Quantitative	Qualitative	Economic	
	HIV testing and treatment services		distribution and 4 IDIs with HCWs.		clients offered HIVST for secondary distribution (approx. 450) Primary partners of cohort. 12 individuals purposively selected for qualitative cohort (IDIs) 4 FGDs; 2 IDIs with HCWs

4.2 Qualitative methods

Qualitative data collection will begin with implementation of participatory activities through community consultation processes and stakeholder discussion, followed by IDI, FGD, mapping, and observation of HIVST distribution (Table 2). Qualitative data will provide understanding of contextual factors that mediated people's choices and behaviour. The qualitative research will explore the following themes:

1. Social support and social networks (friends, workmates, church, customs, support after testing, attitudes of HCWs)
2. Livelihood options
3. Knowledge of HIV testing and HIVST, and individual attitudes towards HIV testing and HIVST
4. Power relations, social harms and gender-based violence within couple/partners
5. Social effects of HIVST including stigma
6. Location and lay-out of distribution points, including community social and physical features
7. Environmental factors (flooding, disease outbreaks, strikes etc.)
8. Promotion and social marketing

A total of 12 FGDs and 46 IDIs will be conducted (see table 2 for distribution). Both the FGDs and IDIs will be conducted by trained RAs with the help of a Junior and senior social scientist. The Neighbourhood Committee (NHC) members will help to identify appropriate venues within the community. The NHC is a community-based organisation created by an act of parliament to ensure community involvement in the management of health related programmes in the community. The size of the focus groups will be between 8-12 participants. This is the recommended size to ensure interaction between the participants. Focus group discussion and IDI participants will be selected purposively for each distribution model, aiming for a range of ages, men and women, and individuals who accepted or declined an offer of HIVST. The composition of the FGDs is described in section 5.1 (recruitment of qualitative study participants). In addition 4 stakeholder discussions with representatives of community based groups and 15 observations of the mechanisms of distribution and interactions between distributors and clients will be conducted.

Twelve individuals from each of the quantitative cohorts linked to secondary distribution methods (24 in total) will be purposely selected to take part in the Secondary Distribution qualitative cohort. They will be interviewed at two points: at recruitment and follow-up.

Community Consultations

Using a consultative process at the beginning of the study, we will: introduce the study to communities and obtain community buy-in; identify appropriate stakeholders that may later

form the system for identifying and reporting social harms; identify case parameters/boundaries through community views about different aspects of the HIVST distribution models. The latter process will involve discussing with community members some of the contextual factors already identified in this protocol and new ones to set the boundaries of the cases. Contextual factors to be explored include: location and distance to the distribution points or places, stigma (anticipated, enacted and internalised), availability of social support, power relations between partners, social harms including intimate partner violence, knowledge of HIV testing and HIVST, and livelihood options.

Community consultations will be conducted among men, adolescents and young people, women attending ANC, key populations and other community members from the general population prior to the commencement of the study. The consultations will primarily be focussed on getting the perspectives of the community on the proposed HIVST distribution models. Participants will be asked for their views on the ideal components of the models, and the likely mechanisms that will facilitate implementation and change.

Time and process for the consultations will differ from community to community depending on the availability of prior information about each community. Overall, community consultations will be conducted within 7 days. An ideal consultative process is presented below:

Community Entry Consultations

The purpose of this stage is to introduce HIVST to traditional and civic leaders- those who have not heard or are experiencing it for the first time, and to update those who already know about HIVST. The following steps will be followed:

1. Hold meetings with the Neighbourhood Health Committees, Ward Development Committees/Resident Development Committees and Health Facility Management to identify key traditional and civic authorities
2. Meet with traditional and civic leaders/ authority
3. Introduce HIVST / study to community leaders and authorities

Community Participatory Assessments

This stage will primarily focus on mapping stakeholders and potential distribution points in the community using purposely selected community members. Information collected will also be used to review case studies:

1. Use of Participatory Rapid Appraisal (PRA) tools to elicit community views about 1) potential stakeholders 2) possible HIVST distribution points 3) possible implementation mechanisms for distribution models proposed by the study
2. Tools to be used will include physical maps and social maps – the former for places and key features of the community and the latter for key stakeholders
    a. Map key stakeholders
    b. Map potential distribution places
    c. Identify physical features that will facilitate and or hinder 1) distribution of HIVST kits 2) uptake of HIVST 3) linkage to confirmatory testing 4) linkage to care by those who self-test positive.

d. Identify social features that will facilitate and or hinder 1) distribution of HIVST kits 2) uptake of HIVST 3) linkage to confirmatory testing 4) linkage to care by those who self-test positive.
e. Identify social and physical features that will facilitate or hinder implementation of secondary distribution models (ANC and HIV+ individuals)

The mapping exercise will be conducted shortly before the commencement of the study to map potential HIVST stakeholders and HIVST distribution models/points. Selected representatives of the community (opinion leaders) will draw community maps and include features of the community that relate to or may impact positively or negatively on HIVST distribution. The exercise will be facilitated in such a way as to enable the community representatives to reflect/relate the features to the distribution models that the study will explore.

Stakeholder Meeting

The meeting is intended to introduce the study to key stakeholders and to ensure inclusiveness of the consultative process:

1. Invite representatives of stakeholders identified above
2. Ensure a broad mix of HIV and non-HIV related stakeholders.
3. Conduct a stakeholder identification review (what stakeholders are missing; ensure that both CBOs and NGOs are included; ensure faith based are included; if the Church is identified as a stakeholder ask for particular groups and organisations within the church that the study can closely relate with)
4. Conduct a 'quick and dirty' stakeholder analysis/ranking to obtain views of community members (participants) about the relative importance they attach to the stakeholders that were identified in 3 above. The ranking technique to be used are from the PRA tools which will enable share their knowledge of the community related to HIV testing and thereby promote a bottom up approach [21].

Stakeholder Analysis

This stage will involve collecting information on key stakeholders:

1. Visit key stakeholders identified from the stakeholder meeting and conduct a detailed stakeholder analysis
2. Features of the stakeholder analysis
    a. Description of the organisation (name, location, mission)
    b. Features of the organisation that relate directly and indirectly to HIVST- in terms of potential for distribution of kits, return of test kits and linkage to care and confirmatory testing
    c. Potential impact of HIVST on the organisation 1) positive Vs negative
    d. Willingness of the organisation to collaborate with STAR 2 and in which ways
3. For potential distribution points, the assessment will include
    a. Accessibility (address, road, location)
    b. Storage and safety

c. Quality assurance
d. Waste management (waste disposal system)

Observations, in-depth interviews and focus-group discussions

Observations will be conducted to observe the process of HIVST distribution and the interactions between staff distributing HIVST, the people and the general setting.

Observation checklists will be developed and utilized by qualitative research assistants to collect and document contextual activities happening at the distribution points, in the community and in qualitative cohort participants' homes/environments when interviews are conducted in these places, or if they visit the homes for any reason. IDIs will be conducted with purposefully selected participants to obtain their perspective on issues pertaining to HIVST distribution and to explore factors that influence access, acceptance, utilisation and linkage to confirmatory and prevention and care services. Focus groups discussions will be conducted with purposefully selected community members to obtain community perspectives on HIVST distribution including secondary distribution.

4.3. Quantitative methods

4.3.1 Process data

Process data collected during distribution of HIVST kits by the SFH and Zambart distributors will be used. SFH has developed simple tools (Appendix 2) that distributors will use for all the distribution models. The information to be collected include age, sex, level of education, occupation, whether an individual accepts the test kit or not and the reasons for not accepting the test kit. In all the distribution models, this information will be collected using a simple paper-based questionnaire or register. The process measures collected for each of the five distribution models will include:

1) The number of HIVST kits offered through the five models of distribution, the number of HIVST kits accepted and the number of HIVST kits returned.
2) Proportion of individuals offered an HIVST who accept the offer, by model of distribution

4.3.2 Secondary Distribution Cohorts

For the two secondary distribution models, we will recruit two cohorts of individuals (one from ANC and one from HIV+ individuals attending HIV testing and treatment services) to collect data on outcomes of distribution over time (Figure 2 and 3 First, we will conduct an exit interview with consecutive HIV+ individuals (attending HIV testing and treatment services) and ANC attendees (HIV status irrelevant) to determine the proportion who accepted an offer of an HIVST for secondary distribution and determine factors associated with accepting an offer of HIVST for secondary distribution.

At the end of the exit questionnaire, individuals self-reporting that they accepted an offer of secondary distribution HIVST will be asked for permission to be followed-up within 1-month after the exit interview to measure use of the secondary distribution HIVST. We will also aim to

follow-up the intended user of the secondary distribution HIVST within approximately 3-months to measure self-reported use and linkage to care as reported by the intended users. A timeline specific to the secondary distribution cohorts is given in Figure 2.

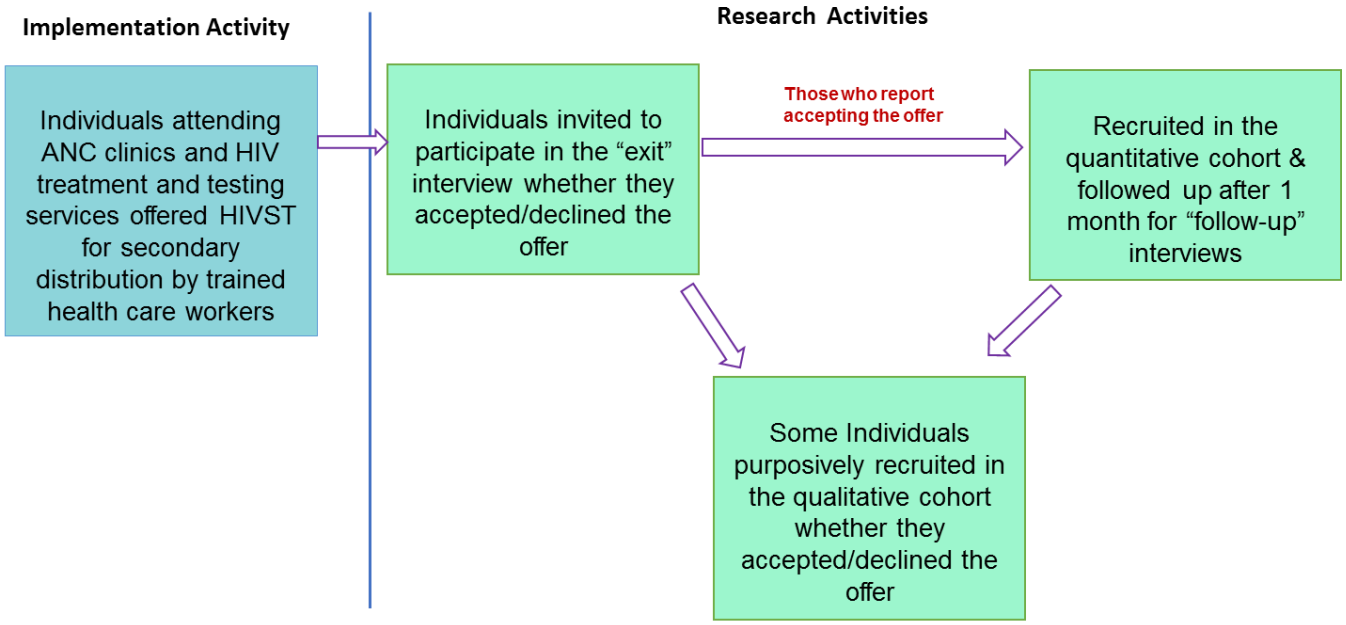


Figure 2: Schematic of the quantitative and qualitative cohort in ANC and ART models

For the secondary distribution cohorts, we will measure individual- and couple-level factors associated with acceptability to the index patient and intended user including: sex, age, previous HIV testing history, newly diagnosed or previously undisclosed HIV, relationship of the distributor and intended user (including type of relationship, age differential, measures of equality and empowerment), history of gender based violence and clinic from which the Index was recruited (ANC or HIV testing and treatment services).

The primary outcome of the secondary distribution cohorts is the:

1) Proportion of index patients who accepted an offer of secondary distribution HIVST kit(s) who report that their sexual partner(s) used the HIVST kit,

Secondary outcomes are the:

1) Proportion of index patients accepting an offer of HIVST kit(s) for secondary distribution,
2) Proportion of index patients who accepted an offer of a secondary distribution HIVST kit(s) who report that their partner used the HIVST kit(s) and linked to prevention or care services within 1-month of distribution

3) Proportion of intended recipients who self-report a) having used an HIVST kit and b) having attended confirmatory HIV testing, or HIV prevention or HIV care services within 3-months of distribution.

Figure 3. Timeline specific to the secondary distribution cohorts

	2018								2019				
	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Exit interview													
IDI with 12 cohort participants													
Analysis of exit interviews													
Follow-up survey index patient													
Folow-up IDI with 12 cohort participants													
Questionnaire with intended user of HIVST													
Analysis of follow-up surveys													
Write up for dissemintation & publication													

4.4 Economic methods for five models of distribution

4.4.1 Economic evaluation

A comparative prospective economic evaluation of HIVST distribution models (Table 1) will be prospectively done from a societal perspective. Costs of HIVST will be compared with facility-based rapid blood finger prick HIV testing services.

4.4.2 Cost analysis

Full provider and societal costs of each distribution model will be estimated using a top-down costing approach. Analysis of programmed expenditures, complemented by field observations, will allow estimated on costs by input and model. Field observations and monitoring will generate allocation factors across activities and shared resources as well as identifying associated economic costs of providing the intervention that are not solely borne by the project. Data sources will include financial records, procurement documents and patient records as well as interviews with distribution team. We will also calculate the costs of linkage to HIV prevention and care services by combining utilisation data reported in the quantitative cohort with unit costs which will be prospectively collected.

Direct medical and indirect user costs and willingness-to- pay (WTP) will be collected through questions asked on service utilisation costs in the case studies. The cost of the main comparator will be collated from the study done in STAR phase I [22]. In the base case, capital cost will be annualized using a 3% discount rate as used in similar studies [22-24]. Costing tools will be adapted from STAR phase II costing tools. We will collate information on process indicators from the M&E data such as numbers of kits distributed, number individuals self-tested, number referred for confirmatory test, number of individuals referred treatment and number starting treatment to obtain unit costs for each indicator.

4.4.3 Cost-effectiveness analysis

The incremental cost-effectiveness of each additional distribution model, relative to the standard of care (facility-based finger HIV prick testing) will be estimated. An existing decision model developed in STAR phase I, estimating $ per DALY averted of the STAR phase I HIVST distribution models will be extended to estimate the cost per DALY averted for the new HIVST

distribution models. The analysis will be undertaken by economists from Zambart with support from economists at LSHTM.

5. Recruitment of study participants

All adults and adolescents aged 16 years or older (age of consent for HIV testing in Zambia) accessing HTS in clinics where HIVST distribution is being implemented are eligible for participation.

Specifically, individuals will be eligible to participate in data collection for the case studies if they:

- Are aged 16 years or older, and
- Able and willing to provide informed consent.

An individual is not eligible for participation in the study if they are:

- Under 16 years of age
- Unable and unwilling to provide informed consent
- Individuals not offered an HIVST kit, or
- If there is anything that, in the opinion of the investigator, would preclude informed consent or make study participation unsafe.

For the secondary distribution cohorts, participants are eligible if they meet these criteria and they are attending ANC or HIV testing and treatment services where secondary distribution of test kits is being offered. Informed consent will be sought for an exit interview and individuals who report accepting an offer of HIVST for secondary distribution to a partner will be eligible for a follow-up interview. Partners (intended users) of index individuals who collect an HIVST for secondary distribution will also be eligible for follow-up, providing consent is gained from the index individual at their follow-up interview and from the intended user.

5.1 Recruitment of qualitative study participants

In total 46 IDIs, 12 FGDs, 4 stakeholder meetings and 15 observations will be conducted. The 42 IDIs will be conducted with purposefully selected individuals accessing VMMC (6), facility/ community-led (6), work places (6) ANC (12) HIV+ individuals (12) and health care workers (4). The 12 FGDs will be conducted with purposely selected community members to obtain community perspectives on the different models; 4 for the ANC model, 4 for HIV+ individuals' model, 1 for VMMC model, 2 for facility-led/community-led model and 1 for the workplace model. Of the 4 FGDs for the ANC model, 2 will be composed of individuals attending the ANC at the clinic and the other 2 of ordinary community members (women) recruited from the community. Similarly, the 4 FGDs for HIV+ will be divided into 2 (mixed sex) for individuals attending ART recruited from the clinic and the other 2 ordinary community members (mixed sex) recruited from the community. The VMMC and work place FGDs will be composed of individuals about to undergo VMMC and staff of work place. Stakeholder meetings will be conducted with representatives of different groups identified during community consultations. The four HCWs who are involved in distributing HIVST will be purposely selected (to ensure a

mix of gender and type or aspect of the model they are involved in) to take part in qualitative interviews. They will be asked for their perspectives on HIVST and the distribution models, linkage to care and prevention services, social harms and sustainability of the models. The study will be explained to them and consent obtained before taking part in the study. Other HCWs may take part in stakeholder meetings at the beginning of the study if the clinic/ HCWs are identified as key stakeholders in HIV care and prevention activities in the community.

Recruitment of participants for the qualitative enquiry will be conducted at 1) the point of distribution/clinic and 2) in the community. Individuals who come to access HTS at the HIVST distribution points will be approached to consent for participation in IDIs and FGDs. Community members who have not yet accessed HIVST or have accessed but have not been selected as IDI participants will be approached to participate in FGDs. Selection of the community members who have not yet accesses HIVST will be done in consultation with existing adolescent community advisory boards, adult community advisory boards, neighbourhood health committees and other community-based stakeholders identified during the community consultation process. These participants will be selected because they are information rich participants who will make meaningful contributions to the interviews/ discussions

Community-based mechanisms for identifying, documenting, and mitigating social harms will be implemented in all models, except the two secondary distribution models in ANC and HIV+ individuals. However, qualitative research participants in the two secondary distribution models will be interviewed for social harms and observation will be made in the qualitative cohort participants (see recruitment details below). The type and nature of the mechanisms will depend on the recommendations from the consultation process. The consultations may recommend use of existing community-based structure (s) or creation of a new one (s). If creation of new structures is recommended, selection of members will be done using criteria developed from the consultative process.

Recruitment of qualitative participants in the workplace model will be done during the distribution process. The SFH distributors will explain to the workers about the need to evaluate HIVST distribution in workplaces. Individuals will then be asked if they are willing to take part in such a research activity. Individuals willing to participate in the workplace research activities will be asked for their name and contact number and for verbal permission to share this information with the researchers. The RAs with the help of a senior social scientist will contact the individuals through phone calls to set up interview appointments. Participants will suggest places where they will be comfortable to be interviewed from. Where possible space for interviews will be provided within the work place to provide a choice to participants. Written informed consent will be obtained from participants and the interview will last between 30 to 45 minutes.

5.2 Recruitment of secondary distribution cohorts

For the secondary distribution cohorts, consecutive study participants will be recruited as they exit their clinical consultation at ANC or HIV testing and treatment services. The staff in charge of HIVST distribution will refer all individual who are offered an HIVST for secondary

distribution. Willing potential study participants will then be referred to Zambart Research Assistants (RAs). To facilitate good rapport between research staff and clinic attendees, the staff in charge of HIVST distribution will introduce the individuals to the study RA.

After introductions, the study RAs will provide detailed information about the study and request written informed consent. They will then administer an "exit" interview. The exit interview will include socio demographic factors, history of HIV testing, and their partners' history of HIV testing, details about their relationship with their partner including questions about gender based violence and whether they were offered a secondary distribution HIVST. If they were offered secondary distribution HIVST they will be asked whether they accepted or declined the offer of a secondary distribution HIVST and the reasons influencing their decision.

After completion of the exit interview, individuals reporting that they accepted the HIVST for secondary distribution will be asked for their consent to be followed-up as they come back for their clinical appointment or at home within 1-month of the "exit" interview to participate in a follow-up interview. To facilitate follow-up of cohort participants and individuals who will be selected to participate in qualitative activities, RAs will obtain locator information from consenting individuals, including telephone numbers and home address.

Approximately one-month after the offer of HIVST for secondary distribution, RAs will follow-up cohort participants who reported accepting an offer of an HIVST for secondary distribution, either at the health facility or in their homes or other convenient place. It is anticipated that a number of individuals who will accept the offer of HIVST secondary distribution may not return to the clinic on the appointment day for various reasons. Such individuals will be followed-up using a phone call or to their homes using the information provided during the exit interviews. A maximum of three (3) attempts on three different days through phone calls or home visit will be made. Individuals not answering the phone calls or not at home after three attempts will be considered lost-to-follow-up from the cohort.

To recruit the intended users of secondary distribution HIVST, individuals accepting a secondary distribution HIVST and who report that their partner (intended user) used the HIVST will be asked for permission to contact their partners, the intended users. For individuals who will give permission, the RA will either: (1) give the individual a card containing the RA's contact details for the partner to call the RA or (2) ask the individual if they are willing to call their partner (intended user) to ask for permission to a) share their (intended user's) phone number with the RA b) to introduce the RA to them (intended user). For intended users who will be willing to share their phone numbers or to talk to the RA, the RA will briefly introduce the study and obtain verbal permission. For intended users who will give verbal permission, the RA will obtain contact details and arrange to meet them. A maximum of three (3) attempts on three different days through phone calls will be made to contact or meet the intended user. RAs will arrange to meet the intended user at the clinic or at their home or any place provided it is safe and convenient for both the RA and the intended user. The intended user will also be provided with information about the study and asked to provide written consent before they are interviewed. The follow-up surveys for the distributor of the secondary distribution HIVST

and the intended user of the HIVST will focus on usage of the collected HIVST and linkage to care or HIV prevention services including their costs of accessing HIVST and linkage to HIV services as well as their willingness to pay for HIVST.

Twelve individuals (6 from the ANC and 6 from HIV+ individuals) recruited in the secondary distribution cohort will be purposively selected to participate in the qualitative cohort to explore the contextual factors affecting secondary distribution HIVST in ANC and through HIV-positive individuals. Individuals selected to participate in the cohort must have self-tested, and accepted secondary distribution on behalf of their partner. Using purposeful sampling, age, and gender will be taken into account to ensure a fair distribution of participants. Qualitative research assistants will spend extended times in the homes of the participants, using the rapport created to generate detailed data on participants' experiences with HIVST and particular the secondary distribution models. Such an ethnographic approach does not necessarily require many participants. RAs will inform quantitative cohort participants that they may be approached by researchers conducting qualitative research and asked to enrol in a qualitative cohort and that they will be asked to consent for this activity. Qualitative RAs will then approach the 12 individuals selected for the qualitative cohort and schedule interviews with them within 5 days. Follow-up interviews will be conducted immediately after the follow up visit for the quantitative cohort interviews. A key aspect of the qualitative cohort will be the extended contact with participants by the researchers in the participants' preferred milieu while at the same time conducting participatory research activities. The rapport created will be critical for prompting participants to share their experiences.

5.3 Recruitment of costing study participants

For costing and willingness to pay studies, recruitment of study participants will follow the same procedure as for the qualitative and quantitative studies. Participants will be recruited as they exit their clinical consultation at ANC or HIV testing and treatment services. The costing study will focus on assessing client's costs of accessing HIVST and linkage to HIV services as well as their willingness to pay for HIVST.

In total 150 interviews will be conducted for both costing and willingness to pay data collection, 42 from participants in IDIs, 12 from qualitative cohort and 46 with users and intended users who will not be recruited in other studies. Costing study will only be done for community-led, work places, ANC and ART distribution models.

5.4 Sample size justification for secondary distribution cohorts (quantitative data collection)

The primary aim of secondary distribution is to increase uptake of HIV testing services among the intended users. Through the secondary distribution cohorts, we will investigate factors associated with use of an HIVST as reported by the index individual. To meet this aim, our sample size is based on two key factors considered *a priori* to influence reported use of the HIVST: knowledge of partners HIV status in the ANC cohort and HIV status disclosure in the cohort of individuals who know their HIV-positive status. There limited evidence of factors associated with use of a secondary distribution HIVST. However, in both groups, we anticipate that reported use of the HIVST will be approximately two-times higher among pregnant

women who state they know their partners HIV status and among HIV-positive individuals who have disclosed their HIV status to their partner.

In a cohort study among women attending ANC in Kenya, ~87% reported distributing the HIVST to their primary partner and that the partner used the HIVST [14]. This was in a clinical trial scenario and so using this figure and extrapolating to a more real life scenario, we hypothesise that in this study among individuals who accept an HIVST, ~60% of women in ANC who report knowing their partners HIV status and ~60% of individuals who report having disclosed their HIV-positive status to their partner will report that their partner used the HIVST at 1-month follow-up. To be conservative in our estimates, we have assumed that 40% of those not reporting these factors will report that their partner used the HIVST. Based on these estimates we require a sample size of approximately 300 per cohort (~600 total) to have at least 80% power to detect this association at the p=0.05-level.

We anticipate that up to 30% of individuals who accept the offer may be lost to follow-up. To account for this potential loss to follow-up, we will therefore recruit approximately 450 individuals per cohort (approximately 900 individuals total) to maintain at least 80% power to detect this association at the p=0.05-level.

As the cohort will be recruited through the exit interview, we will continue with the exit interviews until we have reached the required sample size of approximately 450 individuals per cohort (~900 individuals overall across the two cohorts) reporting that they have accepted an offer of a secondary distribution HIVST and consenting to the follow-up within 1-month.

We plan to follow-up the intended user of the HIVST to measure linkage to confirmatory testing, care and prevention services. However, these results will be descriptive to understand pathways into care. The study is not powered to explore factors associated with linkage.

6. Data Collection and Management

Zambart has extensive experience ensuring quality data management. This include a Quality Management Plan (QMP) and Standard Operating Procedures (SOP) developed for each study based on study design, data collection instruments and data analysis procedures, with routine data quality audits conducted for quality assurance purposes.

6.1 Qualitative Data

Qualitative data will be collected through handwritten field notes of different observations (observations of the interactions between individuals and SFH staff distributing HIVST, observations of individuals navigating the health facility system or the settings for the other models, observations of interactions between individuals who accept offer of HIVST for secondary distribution and their partners), handwritten notes of mapping activities, and interviews (IDIs, FGDs). Field notes will be written in notebooks designated for each model and securely kept in the social science lockers. The field notes will then be typed and stored on a password protected computer. Transcripts of IDIs and FGDs will also be kept on a password protected computer.

6.2 Quantitative process data

At each HIVST distribution point, SFH will use trained HIVST distributors to collect paper-based process data. Trained SFH distributors will capture data on socio-demographics such the age of the client, occupation and whether an individual has accepted HIVST or not (Appendix 3). For individuals who HIVST within the distribution points, the distributor will also be available to collect data related to usage and test results.

SFH will assess the quality and accuracy of process data through supervisory visits. Zambart will use the SFH collected process data in the case studies for all the models of distribution. If needed, and in consultation with SFH, additional data will be collected by adding a few questions to the SFH data collection tool.

Data will be manually double entered into a specifically designed database (Microsoft Access). This data will then be cleaned according to data SOPs. All computers are password protected and all data will be stored on a regularly backed-up secure server held at Zambart. No names or personal identifiers will be entered.

6.3 Quantitative secondary distribution cohort data

Quantitative data for the exit and follow up surveys will be electronically captured using password-protected electronic devices (EDCs). Data will be synchronized to a central server at Zambart offices. Quantitative data will be checked on a daily basis for errors. If required, additional trainings will be provided to the RAs. To ensure quality data is collected, the EDC program will encrypt survey data including the names, addresses and GPS-coordinates of the visited distribution point or households to minimize the risk of identification of participants by individuals other than RAs. In addition, Zambart will assess quality through monthly supervisory monitoring visits. All data will be cleaned and analysed using Stata software (Stata Corporation, College Station, Texas, USA). Analyses will be carried out together with the London School of Hygiene and Tropical Medicine.

6.4 Storage of data and Record keeping

All the source information collected will be stored for 7 years after the study has ended after which the data will be destroyed. All paper copies that will have the participants' personal information will be kept securely in a locked cabinet in a locked room that is accessed by only assigned study staff. All electronic data will be stored on a server and will be encrypted and password protected and will only be accessible by the assigned staff. Paper copies without participants' personal information will be store in a locked room accessible by assigned staff.

7. Statistical Analysis

7.1 Qualitative data analysis

In-depth interviews and FGD will be audio-recorded. Qualitative RAs will play the recordings and transcribe the recording. A draft codebook will be developed earlier, before fieldwork using the objectives of the qualitative enquiry. It will be reviewed during field work and transcription to take into account emerging issues. The initial codebook will be developed with reference to the contextual factors which the study will be exploring and later reviewed for the emerging issues from the IDIs, FGDs, and field notes. As the particular design used for this study is not grounded theory, no attempt will be done to conduct a constant comparative analysis to reach saturation. However, having extended contacts with participants and tools with scripted probes will help to generate detailed and rich experiences by the participants. Qualitative RAs will transcribe the interviews straight onto special designed matrices. These matrices will contain thematic areas found in the codebook which will have been reviewed at this stage. This will enable the interpretation and comparison of the findings within specific thematic areas as well as across themes, participants, and distribution models. In the long term, all interviews will be fully transcribed by re-listening to the recordings, imported into Nvivo or Atlas ti and coded using a revised codebook.

7.2 Process Data

All paper-based data will be coded and entered using Microsoft Access. We will use descriptive analysis to describe the numbers of people who were offered a test, proportion who accepted HIVST and reasons for not accepting the offer. The data will be segregated by age and distribution model.

7.3 Quantitative secondary distribution cohort data

For the quantitative data arising from the secondary distribution cohorts, we will conduct analyses separately for the ANC and HIV testing and treatment cohorts. We will use descriptive analyses to describe the proportion of individuals accepting an offer of HIVST and the proportion who report that their partner used the HIVST. We will use standard logistic regression adjusting for study site to explore factors associated with accepting an offer of HIVST and with reported use of the HIVST.

Although the index individuals will be asked about linkage to care at 1-month follow-up, we will measure linkage to care using data from the intended users followed-up within 3-months after distribution. Linkage will be measured as the number of individuals reported to have linked to care (defined as accessing confirmatory testing services or attending an HIV care clinic for HIV-positive individuals or accessing VMMC services for HIV-negative males) among those who reported use of the HIVST.

7.4 Cost data

Cost data will be analysed separately by the economics team in STATA 14. Costs will be descriptively categorised into direct and indirect costs. To assess the economic burden HIVST,

we will compare sum of patients' direct non-medical and indirect costs with the household per capita expenditure. We will use a multivariable Tobit regression model to determine cost predictors.

Among individuals participating in the follow-up survey, we will describe reported use of the HIVST and investigate factors associated with reporting use of the secondary distribution HIVST. We will also describe linkage to ART or voluntary medical male circumcision, and time to linkage to care. Linkage data will primarily rely on reported use by the index individual, but we also aim to describe this among the intended users if consent is provided to follow-up partners and partners consent to participate in the study.

8 Ethical Considerations

8.1 Consent

Research staff from Zambart will be responsible for taking consent from individuals. Zambart train all staff in Good Clinical Practice and research ethics. For all research activities (except observations and mapping), individuals will need to provide written informed consent to participate. The researcher will first provide the potential participant with an explanation of the study as well as an information sheet with study details. This information will be provided in the language requested by the participant; English, Nyanja or Bemba. The researcher will explain that any individual-level data collected by the study may be shared publicly but will not contain the name or any personal identifier of the individual. The researcher will answer any questions raised by the individual and allow them sufficient time to come to a decision. Participants will then be required to give consent. Investigators request a waiver of parental/ guardian consent for individuals aged 16 to 17 attending ANC and HIV testing and treatment services for the following reasons:

1. The cultural setting in Zambia is such that some women usually require permission from their husbands to consent for anything including HIV testing services. It will be particularly difficult for young women attending ANC and HIV testing and treatment services to freely decide whether to accept an HIVST kit for secondary distribution to their partner given the circumstances.

2. HIV self-testing is now standard practice in Zambia and individuals aged 16 and above can choose whether to self-test for HIV or not. The research component is not providing any additional testing or treatment, but rather exploring the experience of these individuals in using the HIVST. The research component is low risk and the probability and magnitude of possible harms that those aged 16-17 may encounter from this study is no greater than what they would encounter in standard HTS services.
3. Given their age, the potential participants may be involved in unfavorable power relationships with their parents or guardians.
4. Pregnant individuals aged 16-17 may not necessarily consider themselves minors. They will have probably made their own decision to come for ANC and those who have attended more than once will have received a lot of information strengthening their position as independent decision makers. All pregnant women are asked to give their own consent for

HIV testing and asked to bring their husband/partner for testing and so this is the normal situation in ANC.

5. Some participants attending HIV testing and treatment services especially HIV treatment may not have disclosed their HIV positive status (if HIV positive) to a third part. Therefore asking for parental/ guardian consent may lead to inadvertent disclosure

Given the reasons, the investigators recommend a waiver of parental consent and full written consent by all participants including those aged 16-17years attending ANC and HIV testing and treatment services.

In cases where participants are illiterate, they will be asked to provide a witness who is acceptable to them who will witness the entire information giving and consent process, give verbal consent plus a thumbprint certified by a witness.

Permission will be sought from MoH to access expenditure and resource utilisation records at health facilities to extract cost data.

Qualitative research activities will be facilitated by trained research assistants supported by the co-PI responsible for qualitative research of this study. Participants aged 16 to 17 will provide assent and consent will then be obtained from their parents or legal guardians. All interviews will be conducted in the language of the participant' choice and the IDI and FGD guides will be translated into two major languages commonly used in Lusaka; Icibemba and ci Nyanja. Participants will be asked for their preferred place of interview and day according to their availability for the interview as well as their perceived safety.

Table 3. Consent requirements for research activities

Research activity	Consent requirements
Qualitative research	
Focus group discussion	Written
Participant observations	Verbal consent
In-depth interviews	Written
Observations	None
Social/physical mapping	None
Community consultations	None
Stakeholder discussions	None
Quantitative research	
Routine programme data	Not applicable
Exit interview	Written
Follow-up surveys	Written

8.2 HIVST procedures

We are not requesting informed consent for individuals accepting HIVST kits because distribution of HIVST kits is now standard practice in Zambia. Multiple partners are providing test kits in the country including PEPFAR, MOH from Global Fund as well as the STAR

consortium. The national Virus Reference Laboratory is monitoring the quality of the test kits. Distribution will be conducted by MOH staff and staff of implementing partners who will be trained to adhere to national and international best practice for HTS, stressing that HIV testing is a voluntary process. HIVST distributors will be trained on provision of pre-test information, including how to perform the self-test, interpret results, and link to confirmatory testing, ART or VMMC services. Observations in communities and in health facilities will be explained to individuals who are being observed and they will have the opportunity to refuse observation. Written consent will not be requested as this would likely alter behaviour. Observation notes will never identify individuals.

8.3 Confidentiality

All information obtained from the study will be stored securely on paper and/or in password protected servers and only researchers in this study will have access to them. Confidentiality will be maintained throughout all data handling and storage processes.

All individuals opting to participate in the cohort and case studies will be informed that any information they provide during interviews will be confidential and not be linked to their name.

8.**4 Privacy and Harm Reduction**

All efforts will be made to ensure that participants are provided with privacy when answering questions which may be sensitive. The research assistants will be trained to work with the participant to ensure a safe and private space is available, either in the participants' home, the facility or if this is not possible in another place of the participants' choice.

Some questions, such as those about violence and social harms are especially sensitive and will require special training of the research assistants. Research assistants will be equipped with information about access to services available in the communities for individuals experiencing violence and social harms, and will be trained to refer and support any participants who have experienced violence. The questions about violence and also about relationships and power within relationships are critical to the understanding of the safety and applicability of secondary distribution of HIV test kits and so are asked for this purpose only. All participants will be reminded that they can decline answering any questions at any time.

A social harm reporting system will be maintained in research areas and will be based on earlier social harms reporting systems developed by Zambart and SFH for the PopART trial and STAR. Potential social harms will be evaluated for seriousness, and likely relatedness to HIVST by the study PI. Social harms reporting, and investigation will take into account confidentiality and anonymity. Tracking of social harms will then enable SFH/Zambart to assess and mitigate adverse events arising from HIVST.

All social harms are reported to the STAR Initiative's independent Technical Advisory Group. Social harms related to HIVST will also be reported to the ethics committees.

The Standard Level of Serious Adverse Event will be used [25] for reporting the following serious adverse events to study leadership within two working days of becoming aware of the event:

1 Death;

2 Disabilities/incapacities;

3 Hospitalisations that are “suspected adverse drug [procedure] reactions” (cannot rule out relationship to study procedures), or

4 Other Grade 4 events that are “suspected adverse drug [procedure] reactions” (cannot rule out relationship to study procedures).

Annual reports with full listings of SAEs will also be submitted to Ethics Review Boards.

9 Study management and dissemination

The case studies are expected to be completed by May 2019, as such the research will run over a period of 12 months.

9.1 Study Personnel

Professor Helen Ayles is the overall Principal Investigator of the trial. At Zambart, Dr Alwyn Mwinga is co-investigator, Dr Musonda Simwinga will lead the qualitative research, and Lawrence Mwenge is the Economist. Chama Mulubwa is responsible for the quantitative data collection as part of the secondary distribution cohorts.

Co-Is at the London School of Hygiene and Tropical Medicine include Dr Katherine Fielding, Dr Melissa Neuman, Dr Bernadette Hensen, and Dr Fern Terris-Prestholt. Co-Is will provide epidemiological, statistical and/or economic expertise.

Co-Is from SFH include Dr Namwinga Chintu and Hambweka Munkombwe, who will provide information on the implementation process of the distribution models.

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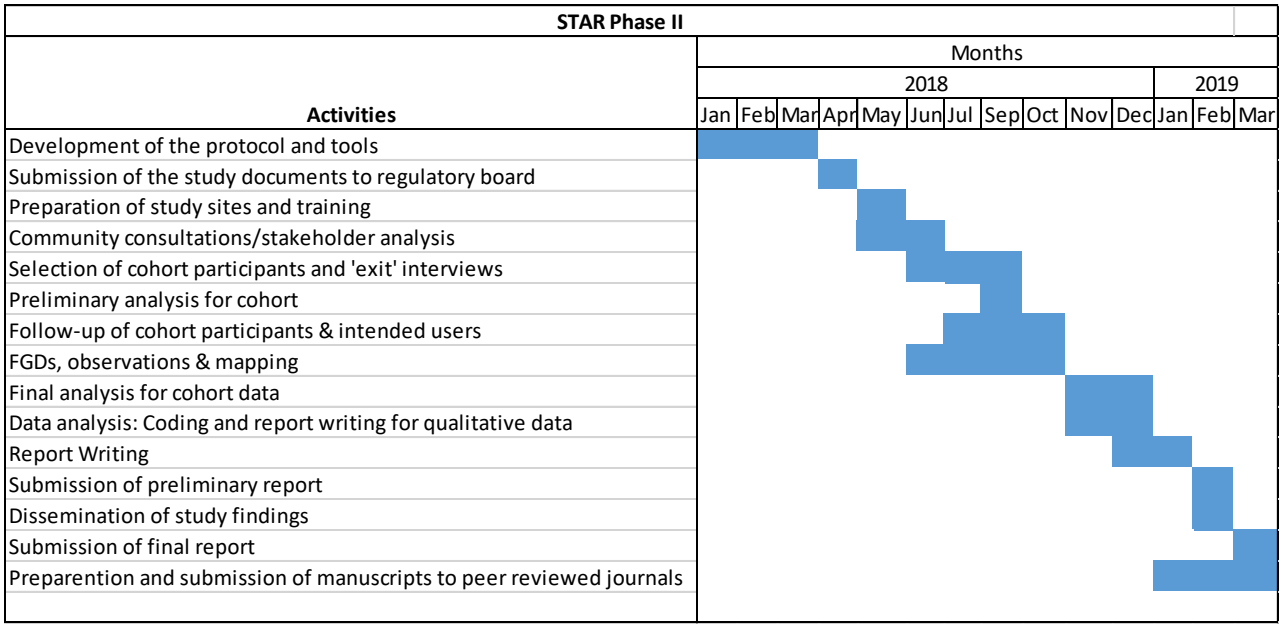
Dr Namwinga Chintu (namwingac@sfh.org.zm)

9.2 Dissemination of study findings

At the end of the study period (see section 9.3 for study timeline), we will disseminate the findings first to the communities where the research took place through a community-level dissemination meeting. To this meeting we will invite community members, district health management teams, the neighbourhood health committee and other stakeholders. We will also disseminate to the Ministry of Health through the HIVST Technical Working Group and internationally, through publications and conferences. We expect that the findings will support the HIVST Working Group in finalising their operational framework and guide decision-making about how and where to distribute HIVST most efficiently.

9.3 Study Timeline

From the time of ethical approval, the study will run over a period of approximately 14 months. Below is a detailed timeline of all research activities, including qualitative data collection time points.



10. Strengths and Risks

10.1 Strengths

The impact of a HIVST strategy on reducing health care costs to households and on overstretched and understaffed health facilities is potentially great, and additional evidence on the workings of these models will allow policy makers to design distribution and linkage programs that meet clients' needs, promote equity in testing, and are cost effective. This collection of case studies will provide detailed information on the process of distributing HIVST through different models of distribution and of users' experiences of these models. The cohort studies within the secondary distribution of HIVST in ANC and ART care will also provide an understanding of whether these strategies reach individuals not being reached by existing HIV testing strategies, and provide better information to target this model of distribution to maximise uptake, minimise wastage and minimise risk. Evidence arising from this research will provide information critical to the national HIV testing strategy in Zambia and other resource-poor countries. Countries are in the process of considering how to deliver HIVST in a sustainable and cost-effective way. This study could provide evidence to the Zambian government of the experiences and costs of different models of distribution, including for HIVST secondary distribution to reach men with HIV testing services.

This study is part of a number of studies funded under the UNITAID STAR Initiative to explore alternate HIVST distribution models in sub-Saharan Africa. STAR has strong links to the WHO, among other stakeholders, to support dissemination of the findings from this study.

10.2 Potential harms and/or risks

HIV testing, including HIVST, is well established and known to have a high level of safety [13]. However, harmful reactions can occur. Adverse events (AE) related to HIVST include all undesirable experiences that result directly from use of the HIVST kit itself or as a reaction from others due to the presence of the kit, use of the kit or results produced from the kit. AEs can be from one person to another, or a person to themselves, and can occur before, during or after self-testing. HIVST may pose harms distinct from HTS performed by a healthcare worker, including concerns of coercion to test. The research described above explores the experiences of clients receiving HIVST through both primary and secondary distribution models, and each of these has potential risks for clients and test users.

Most previous research assessing HIVST has focused on primary distribution models, in which the intended HIVST user receives a test kit from a healthcare worker or lay provider. Studies of primary distribution models have shown that the models are acceptable and safe for clients, with few or no social harms reported. To date, studies of the distribution of HIVST by volunteer-counsellors in Malawi have found a low incidence of harms.[2] Some 3% of individuals reported feeling coerced into self-testing, however, among this group of individuals, 92% were highly satisfied with self-testing and 94% stated they would recommend self-testing to family/friends.[2] We found little evidence of serious adverse events due to HIVST in a 3ie-

funded trial of the door-to-door offer of HIVST as an option for HIV testing and a STAR-funded trial of the impact of community-based self-test distribution on population testing coverage.

There is less evidence available on the frequency of social harms after secondary distribution of tests, though a study of the effectiveness of secondary distribution of HIVST to male partners of ANC users in Malawi had no social harms reported [13]. Nevertheless, distribution of HIVST to a woman for use by her sexual partner may pose serious risks, including risk of gender-based violence or coercion to self-test. These risks will be mitigated at the time of test kit distribution, and a community social harms reporting network will be used to identify and respond to harms related to the research programme. A system and a SOP for reporting and documenting social harms by Zambart already exists. This system will be used throughout the HIVST distribution period to respond to incidences of coercion, gender-based violence, and other potential unintended consequences from self-testing for HIV. The NHC members will be trained in research ethics and in understanding social harms related to HIVST. We will have regular meetings with the NHCs to get feedback. The NHC will include discussion of the HIVST study on the agenda and will occasionally invite other community groups for this discussion. We will also have meetings with the victim support units (VCUs) of the Zambia police service located in each community and GBV units at the health facilities where they exist. One community (Chipata) also has a robust Community Advisory Board (CAB) whose members have already been trained in research ethics and identifying incidents related to studies being conducted by Zambart in this community. Anonymity will be maintained during the meetings with community representatives by not mentioning names. Follow up will be made with the person who reported the incident if it is deemed serious. A grading system for determination was already included in the protocol. However, study and MOH staff may themselves come into contact or learn of a social harm. When this happens, he/she will follow the established reporting mechanism by reporting to his/ her supervisor. The supervisor will confirm and categorise the social harm and use appropriate reporting template. Non-serious incidents/ social harms will be collated and sent to the Regulatory Affairs Officer (RAO) at the end of the month while the serious incidents/ social harms will be reported to the PI and the RAO within 48 hours of occurrence.

Known individuals who report serious incidents/ social harms including gender-based violence will be referred to the counsellor at the health facility. The lay counsellor will provide assistance and refer individual for further services or organisations if needed. Organisations where individuals who need additional services will be referred to are likely to include the community development officer, the gender-based violence unit at the local police post, Young women Christian Association (YWCA) and the Young Men Christian Association (YMCA) as well as any other identified organisations.

At the time of distribution, the primary HIVST distribution staff from MOH or SFH will ensure that women choosing to take a HIVST for their male partner will also be informed that counselling for the couple on their HIV test result or support (including reporting social harms)

in conducting the oral HIV self-test is available at the distribution points. Where a man at the HIV testing and treatment services or other distribution models is requesting a HIVST for his female partner to use, the lay counsellors will similarly assess whether there is likely any risk of coercion to test. The SFH, MOH or Zambart staff or lay counsellors will ensure that the person they offer the test kit understands the consequences of forced testing and acknowledges that they will not force anyone to test using the kit. In the training given to lay counsellors prior to the implementation of a 3ie-funded HIVST trial (LSHTM ethics ref 11846; UNZABREC ref: 003-09-16) nested within the HPTN 071 PopART trial (both conducted by Zambart), potential social harms and actions to be taken by the lay counsellors were discussed. In the training, the lay counsellors learnt to categorise incidents between serious and non-serious and between those related and those not related to the study. They also learnt how to report and what reporting template to use according to the category the incident falls in. Zambart will work with SFH and MOH to ensure that information from the 3ie- funded HIVST intervention applicable to this study is shared with all the staff and distributors involved in the distribution of HIVST kits. Zambart will also share information that will help in providing a refresher training that will include a discussion of social harms specific to distribution of HIVST.

Monitoring of social harms will be conducted by SFH/Zambart as described previously

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12. Appendixes

Appendix 1: Description of the models of HIVST distribution

1. VMMC model

This model will be implemented by SFH. Existing VMMC health promoters active in STAR phase 1 and currently creating demand for VMMC services in SFH supported sites will be trained to distribute HIVST kits alongside VMMC demand creation. All potential self-testers will obtain HIVST kits as well as information brochures, envelopes for putting used test kits and self-referral cards from the distributor. The target audience are potential VMMC clients within the communities surrounding the project facilities. Each potential tester will be provided with information by the VMMC distributor on how to conduct a self-test, interpret results and important post-test steps, particularly linkage to VMMC for negative males.

This activity will be carried out during regular VMMC demand creation visits in the communities within designated zones of the health facility catchment areas using currently used interpersonal (IPC) approaches that include one-on-one discussion with potential clients in homes and "hot spots" (areas where potential VMMC clients are found such as market places) and large group discussions. This testing channel is expected to increase VMMC intake by reaching out to potential clients who may have not accessed VMMC through the facility-based HIV testing. Remuneration for CBDs is monetary and will be based on performance according to the number of kits distributed. Data collected during distribution and in VMMC health promotion register will determine the impact of HIVST on VMMC services.

2. Combined community- and facility-led model

This model will be implemented by MOH, Zambart and SFH. It includes facility- and community-led models of distribution which will be implemented as follows:

Facility-led: The facility-led model will utilize the existing facility systems of services delivery. Distribution of HIVST kits will be done within the facility and during facility outreach programs.

- **Distribution within the facility:** the distribution of HIVST kits will be integrated within various departments in select health facilities including the Maternal Child Health (MCH), Out-patient Department (OPD) and other departments within the facility using algorithms that the STAR program will develop. HIVST kits will be offered to clients as they wait for clinical services in triage areas and also in consultation and counselling rooms. Clients will then test themselves in designated private areas within the facility and present their used HIVST to facility staff for recording of results. This model is expected to increase the efficiency and effectiveness of HTS delivery at the facility level by triaging out individuals testing negative as only clients testing positive will require more of the facility staff time for confirmatory HIV testing and post-test counselling. All existing facility lay counsellors and HCWs will be trained or oriented to the required procedures and algorithms.

- **Distribution through general facility outreach structures:** the distribution through facilities outreach structures approach will use the existing facility outreach programs such as expanded program for immunization in health posts and other areas within facility catchment area. Lay counsellors will be included in the outreach teams to be able to offer self-testing to would be testers. Similar to the processes at facility level, clients will test themselves in a private area and give their result to the healthcare provider.

  As this model will be embedded within the MOH existing work flows, there will be no formal remuneration of work done but non-monetary recognition will be given to highly performing departments and facilities. Data will be collected by facility lay counsellors and HCWs using provided registers. Passive individual tracking will be done and linkage rate to care, treatment will be established through facility level testing and immediate returning of kits for recording. In addition, Linkage rate to care, treatment established through PHIA and DHS. The audience for this model is all targeted population above the age of 16 years.

Community-led: The community-led model will use the existing community structures that are otherwise not directly linked to the health facilities.

- In the SFH sites, the distribution will be through shops that will act as community access points. The concept of using these community access points for distribution of HIV prevention products has been tried and proven successful within SFH programs, specifically under the SARAI family planning project where condoms are distributed from community shops at no cost to the client. Similarly, the community access points willing to distribute HIVST materials will be identified and trained to distribute HIVST kits to members of the community free of charge. Data will be collected by shop owners using simplified registers that will capture vital project information. There will be no formal remuneration of work done but non-monetary recognition will be given to highly performing outlets. In addition, shops will enjoy free radio advertisement that will be provided during radio HIVST demand creation programs. There will be no individual tracking for linkage to care and treatment, but this will be established through PHIA and demographic health surveys.
- In the non-SFH sites managed by Zambart, the process will involve identification of community hubs (such as kantembas) and training of the existing carder of lay counsellors called Community HIV providers (CHiPs) on how to support the kantembas in the distribution of HIVST services and linkage to the health facility. Data will be collected by the CHiPs using the electronic data capture devices. In these sites, the lay workers will actively track linkage to confirmatory and linkage to care particularly linkage to the community health facility.

The entry point to these structures will be community gate keepers such as civic leaders, Community Advisor Boards (CABs) and community 'game changers'. For easy identification, the shops and kantembas will be branded for HIVST. As in the community-based model, all potential testers will obtain HIVST kits as well as information brochures, and self-referral cards

for linkage to post-test services from the distributor. Information on how to conduct a self-test will also be available on phones and tablets for clients to obtain or view. This distribution channel is expected to increase HIV testing uptake by serving potential testers who may have opted out of existing HTC settings at the health facility, through community CBDs or due to other HTC accessibility barriers. The audience is all targeted population above 16 years.

3. Workplace distribution model

This model will be implemented by SFH and will use SFH staff to conduct routine HIVST activities in targeted workplaces where testing in traditional models is unsuccessful. The entry point will be work place wellness programs or days. This model will identify leaders of wellness programs to take lead in identification of distribution points, timing or modes within the work place environment. The targeted workplaces are the banks, mobile phone providers, mines, government and quasi government departments, manufacturing companies and others that will be mapped and assessed by teams in geographical regions where this model will be delivered. SFH staff and workplace peer educators where applicable will use an IPC approach to provide information to the testers and an option of a video on the testers' mobile phones or program tablet will be provided. There will be no additional payment to SFH staff for undertaking this activity. The target audience is the working class with a focus on men. There will be no individual tracking for linkage to care and treatment, but this will be established through PHIA and demographic health surveys.

4. Secondary distribution:

The secondary distribution will be conducted in public health facilities. There will be two ways of distribution: 1. Through ANC and PNC clinics; 2. through index testing in HIV testing and treatment services.

- **Through ANC clinics:** The women attending ANC and PNC who receive routine provider-based HIV testing as per prevention of mother-to-child-transmission (PMTCT) guidelines will be offered an option of obtaining an HIVST kit for secondary distribution to their partners at home. The aim is to increase the uptake of HIV testing among couples in pregnancy and postpartum period for prevention of mother-to-child-transmission and to increase HIV testing amongst males.
- **Through index testing through HIV+ individuals**: In this model, clients enrolled in ART clinics and clubs, and those attending other HIV testing and treatment services such as VCT will be offered to obtain HIVST kit for secondary distribution to their partners at home. The aim is to increase the uptake of HIV testing in relationships where one partner is a known HIV positive. This will allow those in sero-discordant partnerships to prioritize effective HIV prevention, such as the use of condoms, immediate antiretroviral therapy (ART), medication adherence by HIV-positive partners, and pre-exposure prophylaxis.

The distribution will be carried out by existing lay counsellors and HCWs that are providing the HTS to the women attending ANC and those providing HIV testing and treatment services. As in other models, all potential testers will obtain HIVST kits as well as

information brochures, and self-referral cards for linkage to post-test services. Information on how to conduct a self-test will also be available on phones and tablets for clients to obtain or view. There will be no formal remuneration of work done but non-monetary recognition will be given to highly performing facilities. The target audience is the male partners who may not have presented themselves at ANC with their female partners and the partners of HIV+ clients. There will be no individual tracking for linkage to care and treatment, but this will be established through PHIA and demographic health surveys.

Appendix 2: Template Information Sheet and Consent forms

Appendix 2 includes the following documents:

1.0 Information Sheet for secondary distribution cohort participants (all participants)
    1.1 Secondary Distribution Cohort Study Consent Form (all participants)
2.0 Information Sheet for follow-up interview with partner (intended user of the HIVST kit – all participants)
    2.1 Secondary Distribution Cohort Study Consent Form (intended user of HIVST kit – all participants)
3.0 Information Sheet for Qualitative Cohort Participants (Secondary distribution participant selected for qualitative cohort – all participants)
    3.1 Secondary Distribution Qualitative Cohort Participants Consent Form (all participants)
4.0 Information Sheet for Qualitative Research not including secondary distribution study participants (all participants)
    4.1 Qualitative Research Participants Consent Form (all participants)

1.0 Information Sheet for secondary distribution cohort participants (all participants)

Participant Information Sheet

Please ask the study investigator or the study staff to explain any words or procedures that you do not clearly understand.

The purpose of this form is to give you information about the research study you are being asked to join. If you sign this form, you will be giving your permission to take part in the study. The form describes the purpose, procedures, benefits, and risks of the research study. You should take part in the study only if you want to do so. You may choose not to join the research project or withdraw from this study at any time. Choosing not to take part in this research will not in any way affect the health care that you or your family will receive. Please read this Information and Consent Form and ask as many questions as needed. You should not sign this form if you have any questions that have not been answered to your satisfaction.

This study is being funded by UNITAID.

Where do we come from?

We work at Zambart, which is a research organisation based in Lusaka on the University of Zambia Ridgeway Campus. We conduct research on diseases of local importance to Zambia and the region. Professor Helen Ayles is the Principal Investigator of this study.

Why are we doing this study?

This is a research study that we hope will help us to understand how to best to distribute HIV self-tests in a community like yours. We are interested in improving access to HIV testing in your community and would like to know what your community thinks about giving an HIV self-test kit (HIV-ST) to an individual who would then give it to their partner. Information will be collected from individuals who attend antenatal clinics or HIV testing and treatment services and were offered an HIV-ST to give to their partner. We would also like to know what happens after your partner receives HIV-ST kit, including whether or not your partner uses the test. We want to find out if self-testing helps your partner to access treatment, for those who have HIV, or prevention services for those who are not infected.

Why are we asking you to take part in this study?

We are asking individuals who are accessing ANC or HIV testing and treatment services at the health centers where HIV-Self testing is offered to consider taking part in this study. We are including all women attending ANC services and individuals 16 years of age or older accessing HIV testing and treatment services. We have not chosen you for any specific reason only that you have come to access ANC or HIV testing and treatment services from the health facility where they are distributing HIV-ST. The results of the study will help us understand how we can reach more people with HIV testing services through their partners

What will happen if you decide to take part in this study?

If you decide to take part in this study, we will ask you to take part in a questionnaire. In this questionnaire, we will ask you some questions about:

- Whether you were offered an HIVST for your partner and whether you decided to take this HIV self-test.
- Details about you and your primary partner.
- Your past experience of HIV testing.
- Your partner's past experiences with HIV testing.
- Additional details on your past use of HIV services, including treatment.
- Costs of accessing HIVST and linkage to HIV services.

- Your willingness to pay for HIVST.

This questionnaire will take approximately 1 hour of your time. If you took an HIV self-test kit for your partner, we will contact you in about 1 month, to ask you about whether your partner used the test kit and what happened afterwards. In addition, we will ask for your permission to contact your partner for whom you collected the HIV-ST. If you do not want us to contact your partner, you can say no and still take part in the questionnaire now and the follow-up questionnaire in about 1 month. If you agree to take part in the follow up interview, we will ask you for your phone number and home address. We will use this information to contact you, if you do not show up for your clinical appointment. If you need to consult your partner before you give us permission, you can say so and we will provide you with the card containing the research's contact details that you or your partner can use. You can also call your partner while you are here to ask them to talk to the researcher. If you do call your partner while you are here, we will explain the study to him/her and ask for permission to meet at the place and time convenient for both your partner and the researcher. If your partner consents to an interview, we will ask your partner about use of the HIV-ST.

What are benefits of the study?
There are no direct benefits to you in relation to this study. However, understanding better how to provide HIV self-testing to your community and the population of Zambia as a whole will provide information that can be used by the Ministry of Health to make policy decisions based on the findings from this study to the benefit of the population.

What are the risks of the study?
Some of the questions that you will be asked may make you feel uncomfortable. You may feel worried or anxious about us contacting your partner. You may also experience some stigmatization from members of your family or from the community and may feel pressured to reveal your HIV status to family or community members.

We would like to remind you that you can refuse to answer any questions that make you uncomfortable and can decide to stop taking part at any time. You can also choose for us to not contact your partner at any time, even if you first give permission for us to follow-up your partner. This will not affect any health care that is available to you or your partner.

Do I have to participate in this study?
Your participation is voluntary. You may withdraw from the study at any time and without giving a reason. You can also decide to answer some questions, and not to answer other questions.
This will not affect any health care that is available to you. You will not be giving up any of your legal rights by signing this information and consent form.

Confidentiality
All information obtained from the study will be stored securely on password protected computer files and only assigned staff in this study will have access to them. Confidentiality will be maintained throughout all data handling and storage processes. If paper is used to collect data, these papers will also be stored securely in a locked cabinet.

We will use a study number, and not your name, to identify you. We will link the information that you give us to this unique number but will not use your name or anything else to identify you personally.

Data Protection

To protect your privacy, you will meet with the researcher in a private area. People who may review your records include the University of Zambia Biomedical Ethics Committee. Ethics Committees (ECs) are committees that watch over the safety and rights of research participants.

What kind of information will be collected from you?

In addition to the questions mentioned above, we will also collect general information such as your age, home address and education status

How will data be recorded?

Some of the information that you will give us will be recorded on paper for example the consent form that you will sign. Other information like the questionnaire will be recorded electronically using a hand-held device. The hand-held device is securely protected by a password only known by the assigned staff. All this information will be assigned a barcode ID so that your confidentiality is maintained.

How will it be stored?

All paper copies that will have your information will be kept securely in a locked cabinet in a locked room that can be accessed by only assigned study staff. All information that is recorded on hand-held devices will be accessed only by the assigned staff. All electronic data will be stored on a server and will be encrypted and password protected and will only be accessible by the assigned staff.

All the information collected will stored for 7 years after the study has ended after which and data will be destroyed.

Who will the information be shared with?

We may share it with people who check that the study is done properly (like the independent ethics committee or review boards). We will publish study results in medical journals, for meetings and on the internet for other researchers to use. Your name will not appear in any publication.

Costs

Taking part in the study will not cost you anything other than your time. For this questionnaire, we will interview you during your visit to ANC clinic or HIV testing and treatment services. If you have collected the HIVST for your partner, we will hold the follow-up interview either at home or during your next visit to the clinic. If this place is not convenient for you, you can suggest a place that's comfortable and convenient.

What happens if I am injured by participating in this study?

It is very unlikely that you could be injured because of participating in this study. However, if you are injured while taking part in this study, you will be given immediate treatment for your

injuries. Zambart has insurance cover to meet the cost for any treatment that may be required in the unlikely event of an injury.

The Ethics Committees that have approved the study are:
University of Zambia Biomedical Research Ethics Committee (UNZABREC), University of Zambia, Ridgeway Campus, Nationalist Road, Lusaka unzarec@unza.zm and London School of Hygiene and Tropical Medicine ethics committee, ethics@lshtm.ac.uk.

What if I have any questions?
If you have any questions about the HIV or about this study, please feel free to ask me. If you think of any questions after we have gone, please feel free to contact us by calling the following number and ask for **Prof Helen Ayles or Dr Musonda Simwinga, Tel: 0211 254710.**

If you have any questions or concerns about your rights as a research participant or want to discuss a problem and would rather speak to someone who is not a part of this research study, you can contact the UNZA Ethics Committee at:

Address: Ridgeway campus, P.O Box 50110, Lusaka Zambia.
Phone No.: +26012 56067
Email: unzarec@unza.zm

1.1 Secondary Distribution Cohort Study Consent Form (all participants)

1. I have received and read/had read to me the information sheet provided by the researchers that explains in detail the reasons for the study. I have read, discussed and understood the purpose of the research. I have asked all the questions that I have about the purpose of the research and feel happy that I have enough information about it.
   OR
   I have had the information explained to by study personnel in a language that I understand. I have had the opportunity to the information, ask questions and have been answered to my satisfaction.
2. I understand the reasons for the study and am willing and happy to participate in it.
3. If I agree to participate in the study I understand what I will be required to do.
4. I understand that if I agree to participate I will be contacted in about 1-months-time and asked to complete a follow-up questionnaire.
5. I understand that my partner will be followed-up only if I give permission for the study team to do so.
6. I understand that if I agree to participate the information I give may be used in scientific publications or saved in a database, but these will not include my name and I will not be personally identifiable.
7. I know that I have the right to stop the questionnaire at any time or to refuse to answer any questions.

I voluntarily agree to take part in this research study

_____ _____

Participant's Name (print) **Participant's Signature/Thumbprint**

Date: _____

I certify that the information provided was given in a language that was understandable to the participant.

_____ _____

Name of Study Staff **Study Staff Signature**

Conducting Consent Discussion (print)

Date: _____

_____ _____

Witness' Name (print) **Witness' Signature**

(As appropriate)

Date: _____

[*Only required if the participant is unable to read or write.]

I agree that the researchers of this study can interview my partner (Please tick appropriate box and sign or thumbprint)

Yes ☐ _____

Signature/thumbprint

No ☐ _____ **Date**

2.0 Information Sheet for follow-up interview with partner (intended user of the HIVST kit - all participants)

Participant Information Sheet

Please ask the study investigator or the study staff to explain any words or procedures that you do not clearly understand.

The purpose of this form is to give you information about the research study you are being asked to join. If you sign this form, you will be giving your permission to take part in the study. The form describes the purpose, procedures, benefits, and risks of the research study. You should take part in the study only if you want to do so. You may choose not to join the research project or withdraw from this study at any time. Choosing not to take part in this research will not in any way affect the health care that you or your family will receive. Please read this Information and Consent Form and ask as many questions as needed. You should not sign this form if you have any questions that have not been answered to your satisfaction.

This study is being funded by UNITAID.

Where do we come from?

We work at Zambart, which is based in Lusaka on the University of Zambia Ridgeway Campus. We conduct research on diseases of local importance to Zambia and the region. Professor Helen Ayles is the Principal Investigator of this study.

Why are we doing this study*?*

This is a research study that we hope will help us to understand how to best to distribute HIV self-tests in a community like yours. We are interested in improving access to HIV testing in your community and would like to know what your community thinks about giving an HIV self-test kit (HIV-ST) to an individual who would then give it to their partner. We would also like to know what happens after the partner receives HIV-ST kit, including whether or not the partner uses the test. We want to find out if self-testing helps them to access treatment, for those who have HIV or prevention services for those who are not infected.

Who are we asking to participate?

In this study we have already recruited individuals who were seen at the clinic and who accepted an HIV self-test on behalf of their partner. We are now asking those partners who received the HIV self-testing kit to take part.

Why are we asking you to take part in this study?

According to the data we have already collected your partner gave you an HIV self-testing kit and so we would like to find out about your experience with receiving the kit and using it.

What will happen if you decide to take part in this study?

If you decide to take part in this study, we will ask you complete an individual interview. We will ask you some questions about:

- Whether you were offered an HIVST by your partner and whether you decided to take this HIV self-test
- Details about you and your primary partner
- Your past experience of HIV testing
- Your partner's past experiences with HIV testing
- Additional details on your past use of HIV services, including treatment

- Any costs you have had in using the HIV Self-test kit or linkage to HIV services
- Your willingness to pay for HIV Self-testing.

This will take approximately 1 hour of your time.

What are the benefits of the study?
There are no direct benefits to you in relation to this study. However, understanding better how to provide HIV testing to your community and the population of Zambia as a whole will provide information that can be used by the ministry of Health to make policy decisions based on findings from this study to the benefit of the population.

What are the risks of the study?
Some of the questions that you will be asked may make you feel uncomfortable. You may also experience stigma from members of your family or from the community and may feel pressured to reveal your HIV status to family or community members. We would like to remind you that you can refuse to answer any questions that make you uncomfortable and can decide to stop taking part at any time.

Do I have to participate in this study?
Your participation is voluntary. You may withdraw from the study at any time and without giving a reason. You can also decide to answer some questions, and not to answer other questions. We would also like to remind you that you can refuse to answer any questions that make you uncomfortable and can decide to stop taking part at any time. This will not affect any health care that is available to you. You will not be giving up any of your legal rights by signing this information and consent form.

Confidentiality
All information obtained from the study will be stored securely on password protected computer files and only researchers in this study will have access to them. Confidentiality will be maintained throughout all data handling and storage processes. If paper is used to collect data, these papers will also be stored securely in a locked cabinet.

We will use a study number, and not your name, to identify you. We will link the information that you give us to this unique number but will not use your name or anything else to identify you personally.

Data Protection
To protect your privacy, you will meet with the researcher in a private area. People who may review your records include the University of Zambia Biomedical Ethics Committee. Ethics Committees (ECs) are committees that watch over the safety and rights of research participants.

What kind of information will be collected from you?
During this study we will collect general information such as your age, home address education status alcohol and drugs. We will also be asked questions about yours and your partners HIV testing information. No one will be able be to recognise you in the data that will be collected.
How will data be recorded?
Some of the information that you will gives us will be recorded on paper for example the consent form that you will sign. Other information like the questionnaire will be recorded

electronically using a hand-held device. The hand-held device is securely protected by a password only known by the assigned staff.

How will it be stored?

All paper copies that will have your information will be kept securely in a locked cabinet in a locked room that can only be accessed by assigned study staff. All information that is recorded on hand-held devices will be accessed only by the assigned staff. All electronic data will be stored on a server and will be encrypted and password protected and will only be accessible by the assigned staff.

All the information collected will stored for 7 years after the study has ended after which and data will be destroyed.

Who will the information be shared with?

We may share it with people who check that the study is done properly (like the independent ethics committee or review boards). We will publish study results in medical journals, for meetings and on the internet for other researchers to use. Your name and your child's name will not appear in any publication.

Costs

Taking part in the study will not cost you anything other than your time. We will interview you during your visit to ANC clinic or HIV testing and treatment services with your partner. If this place is not convenient for you, you can suggest a place that's comfortable and convenient.

What happens if I am injured by participating in this study?

It is very unlikely that you could be injured as a result of participating in this study. However, if you are injured while taking part in this study, you will be given immediate treatment for your injuries. Zambart has insurance cover to meet the cost for any treatment that may be required in the very unlikely event of an injury.

The Ethics Committees that have approved the study are:

University of Zambia Biomedical Research Ethics Committee (UNZABREC), University of Zambia, Ridgeway Campus, Nationalist Road, Lusaka unzarec@unza.zm and London School of Hygiene and Tropical Medicine ethics committee, ethics@lshtm.ac.uk.

What if I have any questions?

If you have any questions about HIV or about this study, please feel free to ask me. If you think of any questions after we have gone please feel free to contact us by calling the following number and ask for **Prof Helen Ayles or Dr Musonda Simwinga**, **Tel: 0211 254710.**

If you have any questions or concerns about your rights as a research participant or want to discuss a problem and would rather speak to someone who is not a part of this research study, you can contact the UNZA Ethics Committee at;

Address: Ridgeway campus, P.O Box 50110, Lusaka Zambia.
Phone No.: +26012 5606
Email: unzarec@unza.zm

2.1 Secondary Distribution Cohort Study Consent Form (intended user of HIVST kit - all participants)

1. I have received and read/had read the information sheet provided by the researchers that explains in detail the reasons for the study. I have read, discussed and understood the purpose of the research. I have asked all the questions that I have about the purpose of the research and feel happy that I have enough information about it.
   OR
   I have had the information explained to by study personnel in a language that I understand. I have had the opportunity to consider the information, ask questions and have been answered to my satisfaction.
2. I understand the reasons for the study and am willing and happy to participate in it
3. If I agree to participate in the study I understand what I will be required to do
4. I understand that if I agree to participate the information I give may be used in scientific publications or saved in a data base, but these will not include my name and I will not be personally identifiable
5. I know that I have the right to stop the questionnaire at any time or to refuse to answer any questions.

I voluntarily agree to take part in this research study

_____ _____

Participant's Name (print) **Participant's Signature/Thumbprint**

Date: _____

I certify that the information provided was given in a language that was understandable to the participant.

_____ _____

Name of Study Staff **Study Staff Signature**

Conducting Consent Discussion (print)

Date: _____

_____ _____

Witness' Name (print) **Witness' Signature**

(As appropriate)

Date: _____

[*Only required if the participant is unable to read or write.]

3.0 Information Sheet for Qualitative Cohort Participants (Secondary distribution participants selected for qualitative cohort - all participants)

Participant Information Sheet

Please ask the study investigator or the study staff to explain any words or procedures that you do not clearly understand.

The purpose of this form is to give you information about the research study you are being asked to join. If you sign this form, you will be giving your permission to take part in the study. The form describes the purpose, procedures, benefits, and risks of the research study. You should take part in the study only if you want to do so. You may choose not to join the research project or withdraw from this study at any time. Choosing not to take part in this research will not in any way affect the health care or benefits that you or your family will receive. Please read this Information and Consent Form and ask as many questions as needed. You should not sign this form if you have any questions that have not been answered to your satisfaction.

This study is being funded by UNITAID.

Where do we come from?

We work at Zambart, which is based in Lusaka on the University of Zambia Ridgeway Campus. We conduct research on diseases of local importance to Zambia and the region. Professor Helen Ayles is the Principal Investigator of this study.

Why are we doing this study?

This is a research study that we hope will help us to understand how to best distribute HIV self-tests in your community. We are interested in improving access to HIV testing in your community and would like to know what your community thinks about giving an HIV self-test kit (HIV-ST) to an individual who would then give it to their partner. Information will be collected from individuals who attend antenatal or HIV testing and treatment services and were offered an HIV-ST to give to their partner. We would also like to know what happens after the partner receives HIV-ST kit, including whether or not the partner uses the test. We want to find out if self-testing helps them to access treatment, for those who have HIV or prevention services for those who are not infected.

Why are we asking you to take part in this study?

You have already agreed to take part in the main study. From that study we are asking for 12 individuals to take part in a more in-depth study where we can better understand exactly what happens when someone is given and HIV self-testing kit to give to their partner, how they decide when to discuss it with their partner and what happens.

What will happen if you decide to take part in this study?

If you decided to take part, we will visit you at home on two occasions to ask you questions about your experience of HIV self-testing- including your experience with the distribution points/ health facility/ secondary distribution, the home environment, the community environment and access to HIV and other health-related services before and after self-testing. This will take approximately 1- 2 hours of your time on each occasion.

What are the benefits of the study?

There are no direct benefits to you in relation to this study. However, understanding better how to provide HIV testing to your community and the population of Zambia as a whole will

provide information that can be used by the ministry of Health to make policy decisions based on findings from this study to the benefit of the population.

What are the risks of the study?
Some of the questions that you will be asked may make you feel uncomfortable. You may also experience stigma from members of your family or from the community who may wonder why someone is coming to talk with you and may feel pressured to reveal your HIV status to family or community members.

We would like to remind you that you can refuse to answer any questions that make you uncomfortable and can decide to stop taking part at any time. This will not affect any health care that is available to you.

Do I have to participate in this study?
Your participation is voluntary. You do not have to take part in this section of the study and if you do not agree to take part you can still continue in the main part of the study. We would also like to remind you that you can refuse to answer any questions that make you uncomfortable and can decide to stop taking part at any time. This will not affect any health care that is available to you. You will not be giving up any of your legal rights by signing this information and consent form.

Confidentiality
All information obtained from the study will be stored securely on password protected computer files and only researchers in this study will have access to them. Confidentiality will be maintained throughout all data handling and storage processes. If paper is used to collect data, these papers will also be stored securely in a locked cabinet.

We will use a study number, and not your name, to identify you. We will link the information that you give us to this unique number but will not use your name or anything else to identify you personally.

Data Protection
To protect your privacy, you will meet with the researcher in a private area. People who may review your records include the University of Zambia Biomedical Ethics Committee. Ethics Committees (ECs) are committees that watch over the safety and rights of research participants.

What kind of information will be collected from you?
During this study we will collect general information such as your age, home address and education status. We will also ask questions about yours and your partners HIV testing information. No one will be able be to recognise you in the data that will be collected.

How will data be recorded?
Some of the information that you will gives us will be recorded on paper for example the consent form that you will sign and notes on our conversations. Other information will be recorded using a recorder.

How will it be stored?
All paper copies that will have your information will be kept securely in a locked cabinet in a locked room that can only be accessed by only assigned study staff. The information on the

recorders will be downloaded and saved on computers protected by a password only known by the assigned staff and few people that will take part in the management of the data. Information / data in the transcripts will be anonymized to maintain your confidentiality. All electronic data will be stored on a server and will be encrypted and password protected and will only be accessible by assigned staff.

All the information collected will stored for 7 years after the study has ended after which and data will be destroyed.

Who will the information be shared with?
We may share it with people who check that the study is done properly (like the independent ethics committee or review boards). We will publish study results in medical journals, for meetings and on the internet for other researchers to use. Your name will not appear in any publication.

Costs
Taking part in the study will not cost you anything other than your time. We will interview you at your home if this place is not convenient for you, you can suggest a place that's comfortable and convenient.

What happens if I am injured by participating in this study?
It is very unlikely that you could be injured as a result of participating in this study. However, if you are injured while taking part in this study, you will be given immediate treatment for your injuries. Zambart has insurance cover to meet the cost for any treatment that may be required in the unlikely event of an injury.

The Ethics Committees that have approved the study are:
University of Zambia Biomedical Research Ethics Committee (UNZABREC), University of Zambia, Ridgeway Campus, Nationalist Road, Lusaka unzarec@unza.zm and London School of Hygiene and Tropical Medicine ethics committee, ethics@lshtm.ac.uk.

What if I have any questions?
If you have any questions about HIV or about this study, please feel free to ask me. If you think of any questions after we have gone please feel free to contact us by calling the following number and ask for **Prof Helen Ayles or Dr Musonda Simwinga Tel: 0211 254710**.

If you have any questions or concerns about your rights as a research participant or want to discuss a problem and would rather speak to someone who is not a part of this research study, you can contact the UNZA Ethics Committee at:

Address: Ridgeway campus, P.O Box 50110, Lusaka Zambia.
Phone No.: +26012 56067
Email: unzarec@unza.zm

3.1 Secondary Distribution Qualitative Cohort Participants Consent Form (all participants)

1. I have received and read/had read to me the information sheet provided by the researchers that explains in detail the reasons for the study. I have read, discussed and understood the purpose of the research. I have asked all the questions that I have about the purpose of the research and feel happy that I have enough information about it.
   OR
   I have had the information explained to me by study personnel in a language that I understand. I have had the opportunity to consider the information, ask questions and have been answered to my satisfaction.
2. I understand the reasons for the study and am willing and happy to participate in it
3. If I agree to participate in the study, I understand what I will be required to do
4. I understand that if I agree to participate I will be contacted in 1-months-time and asked to complete a follow-up interview
5. I understand that if I agree to participate the information I give may be used in scientific publications or saved in a database, but these will not include my name and I will not be personally identifiable
6. I know that I have the right to stop the interview at any time or to refuse to answer any questions.

I voluntarily agree to take part in this research study

_____ _____

Participant's Name (print) **Participant's Signature/Thumbprint**

Date: _____

I certify that the information provided was given in a language that was understandable to the participant.

_____ _____

Name of Study Staff **Study Staff Signature**

Conducting Consent Discussion (print)

Date: _____

_____ _____

Witness' Name (print) **Witness' Signature**

(As appropriate)

Date: _____

[*Only required if the participant is unable to read or write.]

4.0 Information Sheet for Qualitative Research Participants (Not including secondary distribution participants - all participants)

Participant Information Sheet

Please ask the study investigator or the study staff to explain any words or procedures that you do not clearly understand.

The purpose of this form is to give you information about the research study you are being asked to join. If you sign this form, you will be giving your permission to take part in the study. The form describes the purpose, procedures, benefits, and risks of the research study. You should take part in the study only if you want to do so. You may choose not to join the research project or withdraw from this study at any time. Choosing not to take part in this research will not in any way affect the health care or benefits that you or your family will receive. Please read this Information and Consent Form and ask as many questions as needed. You should not sign this form if you have any questions that have not been answered to your satisfaction.

This study is being funded by UNITAID.

Where do we come from?

We work at Zambart, which is based in Lusaka on the University of Zambia Ridgeway Campus. We conduct research on diseases of local importance to Zambia and the region. Professor Helen Ayles is the Principal Investigator of this study.

Why are we doing this study?

This is a research study that we hope will help us to understand how to best distribute HIV self-tests in Zambia.

Why are we asking you to take part in this study?

We are asking individuals who are in contact with the health services or distribution points where HIV self-testing is being offered to consider taking part in this study. The results of the study will help us understand how we can reach more people with HIV testing services. We will ask questions to collect information about whether you accepted the HIV test kit and also on your use and access to HIV related health services. In addition, we will also ask you about any costs you had in accessing HIVST and linkage to HIV services as well your willingness to pay for HIVST.

Who are we asking to participate?

We are including people from this community who are 16 years of age or older. We have not chosen you for any specific reason only that you stay in this community and / or you have accessed health services from the health facility/ HIV self-testing distribution points.

What will happen if you decide to take part in this study?

We will ask you to take part either as an individual, or in a group discussion. In individual interviews, we want to get your understanding of HIV testing and in particular what you thought about how the self-testing was done and the environment within which it was done. From group discussions, we want to get the views of community members about HIV self-testing. These may not have necessarily gone to access the health services at the HIV self-testing distribution points or at the health facility. This will take approximately 1-2 hours of your time.

What are the benefits of the study?
There are no direct benefits to you in relation to this study. However, understanding better how to provide HIV testing and treatment services to your community and the population of Zambia as a whole will provide information that can be used by the ministry of Health to make policy decisions based on findings from this study to the benefit of the population.

What are the risks of the study?
The risk that may happen to you while taking part in the study may include during the interview, some of the questions that you will be asked may make you feel uncomfortable. You may also feel anxious that someone will talk about you during discussions. However, trained research assistants will facilitate all group discussions. You may also experience some stigmatization from members of your family or from the community and may feel pressured to reveal your HIV status to family or community members.

We would like to remind you that you can refuse to answer any questions that make you uncomfortable and can decide to stop taking part at any time.

Do I have to participate in this study?
Your participation is voluntary. You may withdraw from the study at any time and without giving a reason. You can also decide to answer some questions, and not to answer other questions. We would also like to remind you that you can refuse to answer any questions that make you uncomfortable and can decide to stop taking part at any time. This will not affect any health care that is available to you. You will not be giving up any of your legal rights by signing this information and consent form.

Confidentiality
All information obtained from the study will be stored securely on password protected computer files and only researchers in this study will have access to them. Confidentiality will be maintained throughout all data handling and storage processes. If paper is used to collect data, these papers will also be stored securely in a locked cabinet.

We will use a study number, and not your name, to identify you. We will link the information that you give us to this unique number but will not use your name or anything else to identify you personally.

Data Protection
To protect your privacy, you will meet with the researcher in a private area. People who may review your records include the University of Zambia Biomedical Ethics Committee. Ethics Committees (ECs) are committees that watch over the safety and rights of research participants.

What kind of information will be collected from you?
During this study we will collect general information such as your age, home address and education status. No one will be able be to recognise you in the data that will be collected.

How will data be recorded?
Some of the information that you will gives us will be recorded on paper for example the consent form that you will sign and notes on our conversations. Other information will be recorded on voice recorders. All this information will be assigned a barcode ID so that your confidentiality is maintained.

How will it be stored?
All paper copies that will have your information will be kept securely in a locked cabinet in a locked room that can only be accessed by only assigned study staff. The information on the recorders will be downloaded and saved on computers protected by a password only known by the assigned staff and few people that will take part in the management of the data. Information / data in the transcripts will be anonymized to maintain your confidentiality. All electronic data will be stored on a server and will be encrypted and password protected and will only be accessible by assigned staff

All the information collected will stored for 7 years after the study has ended after which and data will be destroyed.

Who will the information be shared with?
We may share it with people who check that the study is done properly (like the independent ethics committee or review boards). We will publish study results in medical journals, for meetings and on the internet for other researchers to use. Your name will not appear in any publication.

Costs
Taking part in the study will not cost you anything other than your time. For this visit, we will interview you during your visit to the health facility or HIV self-testing distribution point. If this place is not convenient for you, you can suggest a place that's comfortable and convenient. For those taking part in the group discussions, the time and place will be decided in consultation with opinion leaders, community advisory board (CAB) members (where they exit) or the neighborhood health committee members.

What happens if I am injured by participating in this study?
It is very unlikely that you could be injured as a result of participating in this study. However, if you are injured while taking part in this study, you will be given immediate treatment for your injuries. Zambart has insurance cover to meet the cost for any treatment that may be required in the unlikely event of injury.

The Ethics Committees that have approved the study are:
University of Zambia Biomedical Research Ethics Committee (UNZABREC), University of Zambia, Ridgeway Campus, Nationalist Road, Lusaka unzarec@unza.zm and London School of Hygiene and Tropical Medicine ethics committee, ethics@lshtm.ac.uk.

What if I have any questions?
If you have any questions about the HIV or about this study please feel free to ask me. If you think of any questions after we have gone please feel free to contact us by calling the following number and ask for **Prof Helen Ayles or Dr Musonda Simwinga, Tel: 0211 254710.**

If you have any questions or concerns about your rights as a research participant or want to discuss a problem and would rather speak to someone who is not a part of this research study, you can contact the UNZA Ethics Committee at:

Address: Ridgeway campus, P.O Box 50110, Lusaka Zambia
Phone No.: +26012 56067
Email: unzarec@unza.zm

4.1 Qualitative Research Participants Consent Form (all participants not including secondary distribution participants)

1. I have received and read/has been read to me the information sheet provided by the researchers that explains in detail the reasons for the study. I have read, discussed and understood the purpose of the research. I have asked all the questions that I have about the purpose of the research and feel happy that I have enough information about it.
   OR
   I have had the information explained to me by study personnel in a language that I understand. I have had the opportunity to consider I have had the opportunity to consider the information, ask questions and these have been answered to my satisfaction.
2. I understand the reasons for the interview/ group discussion and I am willing and happy to participate in it
3. If I agree to participate in the interview/ group discussion and I understand what I will be required to do
4. I understand that if I agree to participate the information I give may be used in scientific publications or saved on a database but these will not include my name and I will not be personally identifiable
5. I know that I have the right to stop the interview/ leave the group discussion at any time or to refuse to answer any questions.

I agree to take part in the study.

---------- -----/--------/------- ----------

Name of participant (BLOCK CAPITALS) Date Signature or thumb print

I confirm that I have explained the study information accurately, and, to the best of my knowledge, the information was understood by the participant and that he/she has freely given their consent to participate*.

---------- -----/--------/------- ----------

Name of Witness (BLOCK CAPITALS) Date Signature or thumb print

---------- -----/--------/------- ----------

Name of facilitator (BLOCK CAPITALS) Date Signature

[*Only required if the participant is unable to read or write.]

Appendix 3: Quantitative data collection tools

Appendix three includes the questions that will be asked to the participants who will be recruited in the quantitative cohort.

Please note: these questionnaires are presented to inform readers of the wording of the questions. The response options, order and skip patterns are subject to change once programmed on electronic data capture devices.

"Exit" Interview Quantitative Cohort Questionnaire (Questions to be asked at the time of distribution – whether at ANC or ART)

Section 0: Preparing for the survey			
Variable Name	**Question**	**Options**	**Option Codes**
PS 1	What is the date today?	[time stamp]	
PS 1a	CLINIC NAME	[EDC CODE]	
PS 2	Scan participant barcode		
PS 3	Which community are you in?	Community 1	1
		Community 2	2
		Community 3	3
		Community 4	4
		Community 5	5
		Other	Specify
PS 4	What models of HIV self-testing distribution are in this community? [tick all that applies]	VMMC	1
		Community- or facility led	2
		Secondary distribution through ANC	3
		Secondary distribution HIV testing and treatment services	4
		Workplace	5

		Other (Specify)	6
PS 5	Through which distribution model was the client offered an HIV self-testing kit?	Secondary distribution through ANC	3
		Secondary distribution through HIV testing and treatment services (ART and VCT)	4
Section 1: Consenting Process			
Consent 1	I would like to take some time to explain the research that we are carrying out in this study about HIV self-testing. At the end of my explanation, you can decide whether you would like to participate and continue with answering specific questions for the study. Before we begin, do you have any questions?		
Consent 2	**Obtain consent using the consent form written in the language that the participant understands**		
Consent 3	DID THE INDIVIDUAL GIVE CONSENT TO PARTICIPATE IN THE STUDY?	No	0
		Yes	1
Section 2: Demographics			
	Today's date	**Auto complete by EDC**	
Demo 1	Sex	Male; Female	1;2
Demo 2	What is your date of birth?	DDMMYYYY	01011900 if unknown
Demo 4	How long have you been living in [NAME OF CURRENT PLACE OF RESIDENCE]?	Years: months	

Demo 5	How many minutes did it take you to come to the health facility?	TIME (minutes)	
Demo 6	What form of transport did you use?	Came on foot	
		Taxi	
		Private car	
		Bus	
		Bicycle	
		Other	
Demo 7	What is the highest level of education you have completed?	No education; Grade 1;Grade 2;Grade 3;Grade 4;Grade 5;Grade 6;Grade 7;Grade 8 Grade 9 ;Grade 10 ;Grade 11 ;Grade 12;College;University;Don't know/Refuse	0;1;2;3;4;5;6;7;8;9;11;12;13;-1

Demo 8	How can you best describe your main income generating activity or work status?	Farmer (own land); Farm work on employers land; Domestic; Work in bar, hotel, guest house; Fishing; Mining; Working in shop; Informal Selling; Commercial sex work; Transport (trucker, taxi driver); Factory; Guard (security company); Police/soldier; Clerical and office work; Government; Teacher; health care; Other Professional; Other (Specify)	
Demo 9	What is your religion?	Roman Catholic; Anglican; Seventh-Day Adventist; Baptist; Pentecostal; Salvation Army; Lutheran; Evangelical church; United Methodist/African Methodist; Jehovah's witness; New Apostolic church (NAC); Apostolic faith Mission (AFM); Zion Christian Church (ZCC); Other (Specify)	

Demo 10	What is your current marital status?	Single/never married; married/living together as if married; separated/divorced; widowed	1;2;3;4
Demo 11	Do you currently have a main/primary sexual partner?	No; Yes	0; 1
Demo 11a	How would you describe your relationship with this sexual partner?	Husband/wife (married or living as married); Boyfriend/girlfriend; casual partner; One-time partner	1; 2; 3; 4
Demo 12	[FOR RA ONLY – WHAT IS THE PURPOSE OF THE VISIT TODAY?]	ANC; HIV testing and treatment services	1; 2
Demo 13	Did you come alone to the facility or you came with your partner	Alone; With my partner	1; 2
Section 3: History of attendance to ANC and of HIV testing			
H_ANC 1	Is this your first pregnancy?	No; Yes; Refuse to answer	0;1; -1
H_ANC 2	When was your last pregnancy or birth?	Year: month	
H_ANC 3	Did you attend antenatal care during your last pregnancy?	No; Yes	0; 1
H_ANC 4	During your last pregnancy, were you tested for HIV during?	No; Yes	0; 1
H_ANC 5	During your last pregnancy, was your partner also tested for HIV?	No; Yes NA (no partner at that time); Refuse to respond	0; 1;2; -1

H_ANC 6	When your partner was tested during your last pregnancy, where was the HIV test done?	ANC clinic I attended Mobile HTC VMMC Home-based He self-tested	1;2;3
H_ANC 7	Is this your first visit to ANC for this current pregnancy?	No; Yes; 2nd; 3rd; 4th; Other (Specify)	0;1; 2; 3; 4
Section 3a: Individuals attending ART Care			
H_ART 1	When did you first test HIV positive?	MM YYYY	
H_ART 2	When did you start ART treatment?	MM: YYYY	
H_ART 4	Have you disclosed your HIV status to anyone?	No; Yes	0; 1
H_ART 5	To whom did you disclose your HIV status?	husband/wife; Boyfriend/girlfriend /partner; Family Member; Friend/neighbour/colleague; Religious leader/; Health care; Other (Specify)	1; 2; 3; 4; 5

Section 4: History and current HIV testing (Questions for women attending ANC)			
H_HIVCT 1	Have you previously tested for HIV?	No; Yes; Don't know/Refused	0;1; -1
H_HIVCT 2	How many times have you tested for HIV?		
H_HIVCT 3	Have you ever HIV tested using an HIV self-test?	No: Yes	0; 1

H_HIVCT 4	When did you last test for HIV?	DD:MM: YYYY	01011900 if date not known
H_HIVCT 5	What was the result of your last (most recent) HIV test?	Negative; Positive; Didn't receive; Don't know/Refused	0;1;2; -1
H_HIVCT 6	During this visit to the clinic, was HIV testing discussed with you?	No; Yes	0;1
H_HIVCT 7	During this visit to the clinic, was oral HIV self-testing discussed with you?	No; Yes	0;1
H_HIVCT 8	During this visit to the clinic, were you offered to self-test using an HIVST kit?	No; Yes	0; 1
H_HIVCT 9	Did you choose to do an oral HIV self-test?	Yes; No; Client doesn't know	1;0; -1
H_HIVCT 10	Why did you choose an oral HIV self-test?	Doesn't like needles; Wants to test at home; Too busy now, test later; Try new way of testing; Wants to test with partner; Other; Client doesn't know/refused; CHiP didn't ask/record; Other (specify)	1;2;3;4;5;9; -1; -2
H_HIVCT 11	What is your partners' date of birth?	DDMMYYYY	01019999 if unknown
H_HIVCT 12	If date of birth unknown, how old is your partner?		
H_HIVCT 13	Where does your partner live?	Same house; same community; outside community; Don't know	1; 2; 3; 4
H_HIVCT 14	How long has your partner been living in [NAME OF CURRENT		

	PLACE OF RESIDENCE]?		
H_HIVCT 15	What is the highest level of education your partner has completed?	No education; Grade 1; Grade 2; Grade 3; Grade 4; Grade 5; Grade 6; Grade 7; Grade 8; Grade 9; Grade 10; Grade 11; Grade 12; College; University; Don't know/Refuse	
H_HIVCT 16	How can you best describe your partner's main income generating activity or work status?	Farmer (own land); Farm work on employer's land; Domestic; Work in bar, hotel, guest house; Fishing; Mining; Working in shop; Informal Selling; Transport (trucker, taxi driver); Factory; Guard (security company); Police/soldier; Clerical and office work; Government; Teacher; health care; Other Professional; Other (Specify)	
H_HIVCT 17	How do you rate your partner's general health?	Very good; good; fair; poor; very poor	1;2;3;4;5
H_HIVCT 18	On average how, many nights a week does your partner spend away from home for work, if at all?	0 (no nights away from home), 1, 2, 3, 4,5, 6, 7	
H_HIVCT 19	Have you ever discussed HIV testing with your partner?	No; Yes	0; 1
H_HIVCT 20	Has your partner ever had an HIV test?	No; Yes; Don't know	0; 1; 2
H_HIVCT 21	When was the last time that your partner tested for HIV?	Year; month	

H_HIVCT 22	Do you know the result of your current partner's most recent HIV test?	No; Yes	0; 1
H_HIVCT 23	What is the HIV status of your partner? *INTERVIEWER*: REMIND PARTICIPANT THAT THEY DO NOT HAVE TO ANSWER THIS QUESTION IF UNCOMFORTABLE. IF SHE SAYS THAT SHE KNOWS BUT DOESN'T WANT TO SHARE – THIS IS CODE 3. IF THE PERSON TESTED BUT DID NOT SHARE THE RESULT WITH THEM SO THEY DON'T KNOW, THIS IS CODE -1	Positive; Negative; partner has not tested (unknown); Partner tested – I know the result but I don't wish to share Don't know; Partner tested – but I don't know the result	1; 2; 3; 4; -1
H_HIVCT 24	Were you offered an HIVST to give to your partner?	No; Yes	0; 1
H_HIVCT 25	Did you accept the offer of an HIVST for use by your partner?	No; Yes	0; 1
H_HIVCT 26	If no, why did you not accept the offer of an HIVST for your partner?	Need partner's permission to take HIVST; Partner recently HIV tested; Partner not interested in HIV testing	
H_HIVCT 27	Before the offer of an HIVST for your partner, had you ever heard of HIVST?		
H_HIVCT 28	Do you think your partner will be comfortable receiving the HIV self-test kit from you?	No; Yes; Don't know	0;1; -1
H_HIVCT 29	If No, why would your partner be un-comfortable to receive the test kit from you?		
Section 5: Question on Intimate Partner Violence			
QIPV 1	If you told your partner that you are visiting the health facility today. And one of the services you	No; Yes; Don't know	0;1; -1

	will receive will include HIV testing, would he react angrily or negatively?		
QIPV 2	In the past 12 months, has your partner		
QIPV 3	Threatened to hurt you, your children or someone close to you?	No; Yes; Don't know	0;1; -1
QIPV 4	Hit, slapped, kicked, pushed, shoved or otherwise physically hurt you?	No; Yes; Don't know	0;1; -1
QIPV 5	If yes, in the past 12 months how many times has this happened to you?	Once; Twice; Three times; Four times; or more times; I don't know	1;2;3;4;5; -1
QIPV 6	In the past 12 months, has you're your partner insulted you or made you feel bad about yourself?	No; Yes; Don't know	0;1; -1
QIPV 6a	If yes, in the past 12 months how many times has this happened to you?	Once; Twice; Three times; Four times; or more times; I don't know	1;2;3;4;5; -1
	If yes to any of the above questions, the lay counsellor should inform the possible social harms that may occur and establish if it is safe to give an individual a test kit their partner.		
Section 6: Questions on gender norms			
QSN 0	Please indicate how strongly you agree or disagree with the following statements.		
QSN 1	"It is normal for a woman to start the discussion with the partner on HIV testing"	Strongly agree; agree; disagree; Strongly disagree	1;2;3;4
QSN 2	It is normal for a woman to ask her male partner to go for HIV testing: agree, disagree	Strongly agree; agree; disagree; Strongly disagree	1;2;3;4
QSN 3	"It is normal for the partner/husband to beat or insult	Strongly agree; agree;	1;2;3;4

	the wife if she has done something wrong. Such as giving him an HIV self-testing kit"	disagree; Strongly disagree	
Section 7: Screening Questions on Alcohol and Drug Use			
Alcohol_0	I will now ask you questions about drinking alcohol and drug use. I know these questions are sensitive and want to remind you that your answers are completely confidential. Do you have any questions before we begin?		
Alcohol_1	How often do you have a drink containing alcohol?	Never; Monthly or less; 2 to 4 times a month; 2 to 3 times a week; 4 or more times a week	1; 2; 3; 4; 5
Alcohol_2	How many drinks containing alcohol do you have on a typical day when you are drinking?	1 or 2; 3 or 4; 5 or 6; 7, 8, or 9; 10 or more	1; 2; 3; 4; 5
Alcohol_3	How often do you have six or more drinks on one occasion?	Never; Less than monthly; Monthly; Weekly; Daily or almost daily	1; 2; 3; 4; 5
Alcohol_4	How often during the last 12 months have you found that you were not able to stop drinking once you had started?	Never; Less than monthly; Monthly; Weekly; Daily or almost daily	1; 2; 3; 4; 5
Alcohol_5	How often during the last 12 months have you failed to do what was normally expected from you because of drinking?	Never; Less than monthly; Monthly; Weekly; Daily or almost daily	1; 2; 3; 4; 5
Alcohol_6	How often during the last 12 months have you needed a first drink in the morning to get yourself going after a heavy drinking session?	Never; Less than monthly; Monthly; Weekly; Daily or almost daily	1; 2; 3; 4; 5
Alcohol_7	How often during the last 12 months have you had a feeling of guilt or remorse after drinking?	Never; Less than monthly; Monthly; Weekly; Daily or almost daily	1; 2; 3; 4; 5
Alcohol_8	How often during the last 12 months have you been unable to	Never; Less than	1; 2; 3; 4; 5

	remember what happened the night before because you had been drinking?	monthly; Monthly; Weekly; Daily or almost daily	
Alcohol_9	Have you or someone else been injured as a result of your drinking?	No; Yes, but not in the last year; Yes, during the last year	0; 1; 2
Alcohol_10	Has a relative or friend or a doctor or another health been concerned about your drinking or suggested you cut down?	No; Yes, but not in the last year; Yes, during the last year	0; 1; 2
Alcohol_11	Among people of similar age and sex as you in this community during an average month, how common do you think it is for them to have six or more drinks on one occasion?	Very common; somewhat common; somewhat uncommon; very uncommon	1; 2; 3; 4
Drugs_1	In your lifetime have you ever used any drugs recreationally?	No; Yes	0; 1
Drugs_2	In the last 12 months, have you used drugs recreationally?	No; Yes	0; 1
Drugs_3	In the last 12 months, which drugs have you used?	Cannabis/Marijuana; Cocaine/Crack; Khat/Miraa; Ecstasy/Disco biscuit; Heroin; Amphetamine/Speed; Tik; Nyamba (any drug mixed with ART and smoked); Glue/solvents/petrol sniffing; Other (Specify)	1; 2; 3; 4; 5; 6; 7
Section 8: Screening questions for stigma			
	Please indicate how strongly you agree or disagree with the following statements.		
SQS 1	"I would be ashamed if someone in my family had HIV"	Strongly agree; agree; disagree; Strongly disagree	1;2;3;4
SQS 2	"I would not like to sit close to someone living with HIV, for	Strongly agree; agree; disagree; Strongly	1;2;3;4

	example on public transport, at church or in a waiting room"	disagree	
SQS 3	"People living with HIV should not share cups"	Strongly agree; agree; disagree; Strongly disagree	1;2;3;4
SQS 4	"People living with HIV should not have sex"	Strongly agree; agree; disagree; Strongly disagree	1;2;3;4
SQS 5	"People living with HIV should not get pregnant/have children"	Strongly agree; agree; disagree; Strongly disagree	1;2;3;4
SQS 6	"people who test for HIV using self-testing should not disclose their HIV status"	Strongly agree; agree; disagree; Strongly disagree	1;2;3;4

	Section 9: Decision making		
Variable name	**Questions**	**Options**	**Option codes**
DM_1	Whom would you consider to be main source of income in your house/relationship?	My partner/spouse; Myself; Both my partner/spouse and I, parents, other	1; 2; 3,4,5
DM_2	Given the total income in your house, roughly what is the percentage of your own contribution?		
DM_3	Do you make major decisions about how money is spent in your household?	No; Yes (someone else's approval needed); Yes (no one else's approval needed)	0; 1; 2

DM_4	Who makes decisions about how money is spent on a daily basis?	My partner/spouse; Myself; Both my partner/spouse and I, parents, other	1; 2; 3; 4; 5
DM_5	Who usually has more say about other important decisions in your relationship/house?	My partner/spouse; Myself alone; Both my partner/spouse and I; other people not including me, other people jointly with me	1; 2; 3;4;5
	Section 10: Couple communication on sex		
CCS_1	Can you communicate with your partner about when to have sexual intercourse?	Never; sometimes; always	1; 2; 3
CCS_2	Can your partner communicate with you about when to have sexual intercourse?	Never; sometimes; always	1; 2; 3
CCS_3	Does your partner take into account your feelings about your sexual desires?	Never; sometimes; always	1; 2; 3
CCS_4	Do you feel comfortable talking with your partner about your sexual relationships?	Yes, no; sometimes/it depends	1; 2; 3
CCS_5	In your sexual relationship with your partner, who usually has more say about whether you have sex or not?	My partner/spouse; Myself; Both my partner/spouse and I	1; 2; 3
	Section 11: Sexual relationships and power		
SRP_1	Please indicate how you feel about the following statements		
SRP_2	If I asked my partner to use a condom, he would get violent	Strongly agree; Agree; Disagree; Strongly Disagree	1; 2; 3; 4
SRP_3	If I asked my partner to use a condom, he would get angry	Strongly agree; Agree; Disagree; Strongly Disagree	1; 2; 3; 4
SRP_4	Most of the time, we do what my partner wants to do	Strongly agree; Agree; Disagree; Strongly Disagree	1; 2; 3; 4
SRP_5	When my partner and I disagree, he/she gets his/her way most of the	Strongly agree; Agree; Disagree; Strongly Disagree	1; 2; 3; 4

	time		
SRP_6	My partner has more say than I do about the important decisions that affect our relationship	Strongly agree; Agree; Disagree; Strongly Disagree	1; 2; 3; 4
SRP_7	My partner always wants to know where I am	Strongly agree; Agree; Disagree; Strongly Disagree	1; 2; 3; 4
SRP_8	A woman's most important role is to take care of her home and cook	Strongly agree; Agree; Disagree; Strongly Disagree	1; 2; 3; 4
SRP_9	My partner does what he/she wants even if I tell him/her not to	Strongly agree; Agree; Disagree; Strongly Disagree	1; 2; 3; 4
SRP_11	Men don't talk about sex, they just do it	Strongly agree; Agree; Disagree; Strongly Disagree	1; 2; 3; 4
SRP_12	My partner would be angry if I asked him/her to test for HIV	Strongly agree; Agree; Disagree; Strongly Disagree	1; 2; 3; 4
SRP_13	A man should have the final word about decisions in a relationship/home	Strongly agree; Agree; Disagree; Strongly Disagree	1; 2; 3; 4
SRP_14	I feel trapped or stuck in our relationship	Strongly agree; Agree; Disagree; Strongly Disagree	1; 2; 3; 4
SRP_15	In general, my partner has more power than I do in our relationship	Strongly agree; Agree; Disagree; Strongly Disagree	1; 2; 3; 4

Follow-up questionnaire secondary distribution cohort - for secondary distributor (individuals given an HIVST for distribution to their partner)

Use of HIV test kits (Question for secondary distributor)			
Variable Name	**Question**	**Options**	**Option Codes**
Use_ HIVST 1	What was the date that you collected the HIVST for your partner?	Year; month; day	
Use_ HIVST 2	When you collected the HIVST for your partner did you also collected an extra test for your own use?	No; Yes	0; 1
Use_ HIVST 3	Did you give your partner an HIV self-test kit that you collected on his behalf?	No; Yes	0; 1
Use_ HIVST 3a	If no, why did you not give the HIVST to your partner?	I lost the kit; my partner already knows his/her HIV positive status; I feared my partner would get angry; my partner has been away from the time I collected the test kit; my partner and I are no longer in partnership; other (Specify); refuse to respond	1; 2; 3; 4; 5; 6; 7
Use_ HIVST 4	Did your partner use the HIV self-test that you gave him?	Yes – I was present when he used the self-test; Yes – I was told that the self-test kit was used; No- he did not use the self-test kit; I Don't know	1; 2; 3; 4
Use_ HIVST 5	What was the date that your partner used	Year; month; day	

	the HIV self-test kit?		
Use_ HIVST 6	When your partner used the self-test, did you also use a self-test at the same time?	Yes (Couple testing); No; Don't know	1; 2; 3
Use_ HIVST 7	What were the results of your self-test?	HIV-positive; HIV-negative; Indeterminate; Don't know; Refused to answer	1; 2; 3; 4; 5; 6
Use_ HIVST 8	Do you know the results of your partner's HIV test?	No; Yes; Don't know; Refused to answer	1; 2; 3; 5
Use_ HIVST 9	What was your partner's test result? *Interviewer*: Remind participant that they do not have to answer this question if uncomfortable. If she says that she knows but doesn't want to share – this is code 99. If the person tested but did not share the result with them so they don't know, this is code 98	HIV-positive; HIV-negative; Indeterminate; Don't know; Refused to answer	1; 2; 3; 4; 5
Use_ HIVST 10	Did your partner go to a clinic or health facility in order to confirm the result that was obtained from the self-test (confirmatory testing)?	No; Yes; Don't know	0; 1; 2
Use_ HIVST 11	Did your partner go to a clinic or health facility for HIV care?	No; Yes; Don't know	0; 1; 2
Use_ HIVST 122	Is your partner currently in ART care?	No; Yes; Don't know	0; 1; 2
Use_ HIVST 13	Did your partner go to the clinic or health facility for HIV prevention services?	No; Yes; Don't know	0; 1; 2
Use_ HIVST 14	What HIV prevention services did they go for?	VMMC; to collect condoms; other (specify)	0; 1; 2

Social Harms/benefits Screening at follow-up visit			
Variable Name	**Question**	**Options**	**Option Codes**

SHS_Fu_1	When you gave your partner the HIV test kits, did you explain that it is for HIV testing?	Yes; No; Don't know	1; 2; 3
SHS_Fu_2	Has anything good happened to you or in your relationship which you think was a result of you talking about HIV testing or giving the test to your partner	Yes; No; Don't know	
SHS-Fu_2a	If yes; What was good? (tick all that are relevant)	Discussed HIV; Was able to tell my partner my HIV status; Know my partners HIV status; Felt more comfortable with my partner; Felt more able to discuss issues with my partner; My partner was more loving/caring; Resolved some of our issues in our relationship Other (free text)	
SHS_Fu_3	From the time your partner received the HIV self-testing kit, Has your partner ever…….		
SHS_Fu_3a	Pushed, grabbed, slapped, choked, hit or kicked you?	Yes; No; Don't know	1; 2; 3
SHS_Fu_3b	Threatened to hurt you, your children or someone close to you?	Yes; No; Don't know	1; 2; 3
SHS_Fu_3c	Insulted you or made you feel bad about yourself?	Yes; No; Don't know	1; 2; 3
SHS_Fu_3d	Taken away money or resources that you/your children need to survive?	Yes; No; Don't know	1; 2; 3
SHS_Fu_3e	Threatened to divorce you?	Yes; No; Don't know	1; 2; 3

SHS_Fu_3f	Sent you back to your family home?	Yes; No; Don't know	1; 2; 3
SHS_Fu_3g	Forced you to have sex when you did not want to?	Yes; No; Don't know	1; 2; 3
SHS_Fu_4a	[If yes to any of the above GBV questions] Did this happen as a result of discussing HIV testing with your partner?	Yes; No; Don't know	1; 2; 3
SHS_Fu_4b	Do you think any of these things were the result of having offered an HIV self-test to your partner?	Yes; No; Don't know	1; 2; 3

Follow-up questionnaire for secondary distribution cohorts – questionnaire for intended user of secondary distribution HIVST kit

Section 0: Preparing for the survey			
Variable Name	**Question**	**Option**	**Option codes**
PS 1	What is the date today?	[time stamp]	
PS 1a	CLINIC NAME	[EDC CODE]	
PS 2	Scan participant barcode		
PS 3	Which community are you in?	Community 1	1
		Community 2	2
		Community 3	3
		Community 4	4
		Community 5	5
		Other	Specify
PS 4	What models of HIV self-testing distribution are in this community? [tick all that applies]	VMMC	1
		Community- or facility led	2
		Secondary distribution through ANC	3
		Secondary distribution through ARTHIV testing and treatment services	4
		Workplace	5
		Other (Specify)	6
PS 5	Through which distribution model was the client offered an HIV self-testing kit?	Secondary distribution through ANC	3
		Secondary distribution through ART	4

Section 1: Consenting Process			
Variable Name	**Question**	**Option**	**Option codes**
Consent 1	I would like to take some time to explain the research that we are carrying out in this study about HIV self-testing. At the end of my explanation, you can decide whether you would like to participate and continue with answering specific questions for the study. Before we begin, do you have any questions?		
Consent 2	**Obtain consent using the consent form written in the language that the participant understands**		
Consent 3	DID THE INDIVIDUAL GIVE CONSENT TO PARTICIPATE IN THE STUDY?	Yes	1
		No	2
Consent 4	WHAT WAS THE MAIN REASON THE PARTICIPANT DID NOT CONSENT?	Time constraints	1
		Confidentiality concerns	2
		Spouse would not agree	3
		Did not want to	4
		Unspecified reason	5
		Other (Specify)	
Section 2: Demographics			
	Today's date	Auto complete by EDC	
Demo 1	Sex	Male; Female	1;2
Demo 2	What is your date of birth?	DDMMYYYY	01019999 if unknown

Demo 3	How long have you been living in [NAME OF CURRENT PLACE OF RESIDENCE]?		
Demo 4	How many minutes did it take you to come to the health facility?	TIME (minutes)	
Demo 5	What form of transport did you use?	Came on foot	
		Taxi	
		Private car	
		Bus	
		Bicycle	
		Other	
Demo 6	What is the highest level of education you have completed?	No education; Grade 1;Grade 2;Grade 3;Grade 4;Grade 5;Grade 6;Grade 7;Grade 8 Grade 9 ;Grade 10 ;Grade 11 ;Grade 12;College;University;Don't know/Refuse	0;1;2;3;4;5;6;7;8;9;11;12;13; -1

Demo 7	How can you best describe your main income generating activity or work status?	Farmer (own land); Farm work on employer's land; Domestic; Work in bar, hotel, guest house; Fishing; Mining; Working in shop; Informal Selling; Commercial sex work; Transport (trucker, taxi driver); Factory; Guard (security company); Police/soldier; Clerical and office work; Government; Teacher; health care; Other Professional; Other (Specify)	
Demo 8	What is your religion?	Roman Catholic; Anglican; Seventh-Day Adventist; Baptist; Pentecostal; Salvation Army; Lutheran; Evangelical church; United Methodist/African Methodist; Jehovah's witness; New Apostolic church (NAC); Apostolic faith Mission (AFM); Zion Christian Church (ZCC); Other (Specify)	

Demo 9	What is your current marital status?	Single/never married; married/living together as if married; separated/divorced; widowed	1;2;3;4
Demo 10	Do you currently have a main/primary sexual partner?	No; yes	0;1
Demo 11a	How would you describe your relationship with this sexual partner?	Husband/wife (married or living as married); Boyfriend/girlfriend; casual partner; One-time partner	1; 2; 3; 4
Demo 12	Did you come alone to the facility or you came with your partner	Alone; With my partner	1; 2

Section 3: Use of HIVST kit			
Use_ HIVST-_IU 1	Did you receive an HIV self-testing kit from your partner?	No; Yes	0;1
Use_ HIVST-_IU 2	Before your partner gave you the HIVST, had you ever heard of HIV self-testing?	No; Yes	0;1
Use_ HIVST-_IU 3	Before your partner gave you the HIVST, had you ever used an HIV self-test?	No; Yes	0;1
Use_ HIVST-_IU4	When did you receive an HIVST from your partner?	MMYYYY	
Use_ HIVST-_IU5	Did you use the HIVST kit?	No; Yes	0;1
Use_ HIVST-_IU 6	If you did not use the test kit, what are some of the reasons why you did not? Please tick all that applies	Too busy; did not know how to use; feared getting the results; already	

		know my HIV-positive status	
Use_ HIVST-_IU 7	When did you use HIVST kit? If you can't remember please give your best guess	Year; month; day	
M_HIV_Test_IU 8	If you don't mind, what was the result of your HIV test using the test kit that you were given by your partner?	Reactive; non-reactive/negative; I don't know; I can't disclose	1; 2; 3; 4
Section 4: History of HIV testing			
H_HIV_Test_IU 1	I would like to ask you questions about your history of HIV testing. [if you used an HIVST from your partner, this is the time before you received the HIVST kit from your partner]		
H_HIV_Test_IU 2	Before receiving an HIV self-testing kit from your partner, had you ever tested HIV?	No; Yes	0;1
H_HIV_Test_IU 3	Please indicate yes to the following statements if they indicate the reasons why you have never tested for HIV and no if they do not I have never tested for HIV before because:	No; Yes	0;1
H_HIV_Test_IU 3.1	I am not at risk of being HIV positive	No; Yes	0;1
H_HIV_Test_IU 3.2	I do not want to know my status	No; Yes	0;1
H_HIV_Test_IU 3.3	I'm afraid of testing positive	No; Yes	0;1
H_HIV_Test_IU 3.4	I'm afraid of stigma and discrimination from testing for HIV	No; Yes	0;1
H_HIV_Test_IU 3.5	My partner won't let me test	No; Yes	0;1

H_HIV_Test_IU 3.6	Other family won't let me test	No; Yes	0;1
H_HIV_Test_IU 3.7	I do not have money to test	No; Yes	0;1
H_HIV_Test_IU 3.8	I cannot take time off work to test	No; Yes	0;1
H_HIV_Test_IU 3.9	It's not a dignified thing to do at my age	No; Yes	0;1
H_HIV_Test_IU 3j	It's not a dignified thing to do at my age	No; Yes	0;1
H_HIV_Test_IU 3.10	It's not a dignified thing to do at my age	No; Yes	0;1
H_HIV_Test_IU 3.11	The health facilities offer poor quality services, including lack of confidentiality	No; Yes	0;1
H_HIV_Test_IU 3.12	I do not trust health providers	No; Yes	0;1
H_HIV_Test_IU 3.13	I do not feel sick enough	No; Yes	0;1
H_HIV_Test_IU 3.14	Other reason	Specify	
H_HIV_Test_IU 3.15	Of the reasons for not testing for HIV, what is the main reason you have not HIV-tested?	OPTIONS from selections picked	
H_HIV_Test_IU 4	When did you last test for HIV?	DDMMYYYY	
H_HIV_Test_IU 4	What was the result of your last HIV test?	Reactive/ positive; non-reactive/negative; I don't know; I can't disclose	1; 2; 3; 4
H_HIV_Test_IU 6	Over the past 12 months, during your relationship with your partner, do you	Yes – I know with another spouse;	1;2;3;4;5

	know or suspect that your partner was having sex with someone else?	Yes – I know with another partner or partners; Yes - I believe there was another partner or partners; No, I know this partner did not have other partners; Don't know/No answer	
H_HIV_Test _IU 7	If you consider your behavior (current or past) with respect to getting HIV (including anything entirely due to a sexual partner you are/were with) - would you consider that you have been at high risk of HIV?	Very high; somewhat high; somewhat low; very low	
Section 4: Motivators of HIV testing			
	When offered an HIVST by your partner, did any of the following encourage you to test		
M_HIV_Test _IU 1	I tested because it was convenient and easy for me to self-test than to test at the clinic	No; Yes	0; 1
M_HIV_Test _IU 2	I have never had an HIV-test and wanted to learn my status	No; Yes	0; 1
M_HIV_Test _IU 3	I had never used an HIV self-test and wanted to use one	No; Yes	0; 1
M_HIV_Test _IU 4	I recently tested HIV negative and wanted to re-check	No; Yes	0; 1
M_HIV_Test _IU 5	I recently tested HIV positive and wanted to confirm my status		
M_HIV_Test _IU 8	I was sick and suspected it was because of HIV	No; Yes	0; 1
M_HIV_Test _IU 9	HIV is very common in this community so I thought I might be positive	No; Yes	0; 1
M_HIV_Test _IU 10	I thought my current/past sexual behaviour put me at high risk of getting HIV	No; Yes	0; 1

M_HIV_Test_IU 11	Many people I know have tested for HIV so I wanted to test as well	No; Yes	0; 1
M_HIV_Test_IU 12	I wanted to be able to get treatment without delay if I tested and was HIV-positive	No; Yes	0; 1
M_HIV_Test_IU 14	I accepted as I had no reason to decline	No; Yes	0; 1
M_HIV_Test_IU 15	I accepted because my partner wanted me to test	No; Yes	0; 1
M_HIV_Test_IU 16	I accepted because my partner forced me to HIV self-test	No; Yes	0; 1
M_HIV_Test_IU 17	I accepted to test because my wife is pregnant so I wanted to protect the health of my wife and baby	No; Yes	0; 1
M_HIV_Test_IU 18	I have or I have had an HIV positive sexual partner and I wanted to know my status	No; Yes	0; 1
Section 5: Questions about Alcohol and drug use			
Alcohol_0	I will now ask you questions about drinking alcohol and drug use. I know these questions are sensitive and want to remind you that your answers are completely confidential. Do you have any questions before we begin?		
Alcohol_1	How often do you have a drink containing alcohol?	Never; Monthly or less; 2 to 4 times a month; 2 to 3 times a week; 4 or more times a week	1; 2; 3; 4; 5
Alcohol_2	How many drinks containing alcohol do you have on a typical day when you are drinking?	1 or 2; 3 or 4; 5 or 6; 7, 8, or 9; 10 or more	1; 2; 3; 4; 5
Alcohol_3	How often do you have six or more drinks on one occasion?	Never; Less than monthly; Monthly; Weekly; Daily or almost daily	1; 2; 3; 4; 5
Alcohol_4	How often during the last 12 months	Never; Less than	1; 2; 3; 4; 5

	have you found that you were not able to stop drinking once you had started?	monthly; Monthly; Weekly; Daily or almost daily	
Alcohol_5	How often during the last 12 months have you failed to do what was normally expected from you because of drinking?	Never; Less than monthly; Monthly; Weekly; Daily or almost daily	1; 2; 3; 4; 5
Alcohol_6	How often during the last 12 months have you needed a first drink in the morning to get yourself going after a heavy drinking session?	Never; Less than monthly; Monthly; Weekly; Daily or almost daily	1; 2; 3; 4; 5
Alcohol_7	How often during the last 12 months have you had a feeling of guilt or remorse after drinking?	Never; Less than monthly; Monthly; Weekly; Daily or almost daily	1; 2; 3; 4; 5
Alcohol_8	How often during the last 12 months have you been unable to remember what happened the night before because you had been drinking?	Never; Less than monthly; Monthly; Weekly; Daily or almost daily	1; 2; 3; 4; 5
Alcohol_9	Have you or someone else been injured as a result of your drinking?	No; Yes, but not in the last year; Yes, during the last year	0; 1; 2
Alcohol_10	Has a relative or friend or a doctor or another health been concerned about your drinking or suggested you cut down?	No; Yes, but not in the last year; Yes, during the last year	0; 1; 2
Alcohol_11	Among people of similar age and sex as you in this community during an average month, how common do you think it is for them to have six or more drinks on one occasion?	Very common; somewhat common; somewhat uncommon; very uncommon	1; 2; 3; 4
Drugs_1	In your lifetime have you ever used any drugs recreationally?	No; Yes	0; 1
Drugs_2	In the last 12 months, have you used drugs recreationally?	No; Yes	0; 1
Drugs_3	In the last 12 months, which drugs have you used?	Cannabis/Marijuana; Cocaine/Crack; Khat/Miraa; Ecstasy/Disco biscuit; Heroin; Amphetamine/Speed; Tik; Nyamba (any	; 2; 3; 4; 5; 6; 7

		drug mixed with ART and smoked); Glue/solvents/petrol sniffing; Other (Specify)	
Section 6: Linkage to HIV care (Only for those who self-test HIV positive)			
Link_HIV_Care 1	After self-testing HIV positive, did you go to the clinic to confirm your results?	No; Yes	0; 1
Link_HIV_Care 2	What was result of your confirmatory test?	Negative; Positive; I don't know; Refuse to respond	1; 2; 3; 4
Link_HIV_Care 3	After confirming your HIV-positive status, did you register at the clinic for HIV services?	No; Yes	0; 1
Link_HIV_Care 4	If yes, what date did you register for HIV care?	MMYYYY	[01011900 if UNKNOWN]
Link_HIV_Care 5	At which clinic did you register for ART care?	At the clinic in my community; At another clinic outside my community; at a private clinic	1; 2; 3
Link_HIV_Care 6	At the clinic, were you given the result of a CD4 cell count test?	No; Yes; Don't know/Refused	0;1; -1
Link_HIV_Care 7	If yes, do you know the result of your last CD4 cell count test?	No; Yes	0; 1
Link_HIV_Care 8	What was the CD4 count result?		
Link_HIV_Care 9	Why did you not register at a clinic for HIV care?	Not ready; clinic too far from home;	1; 2; 3
Link_HIV_Care 10	Have you started taking ART treatment?	No; Yes	0; 1

Link_HIV_Care 11	When did you start taking ART?	DDMMYYYY	
Link_HIV_Care 12	Do you know people who are taking ART?	No; Yes	0; 1
Link_HIV_Care 8 1	Who was it you knew, who had been on ART? Please choose all that apply from:	Sexual partner; Household member(s) (not including sexual partner); friend(s)/neighbour(s)/colleague(s); other	1; 2; 3; 4
Link_HIV_Care 9	Have you disclosed your HIV status to anyone, except to me for the purpose of this study?	No; Yes	0; 1 If No skip to Link_HIV_Care 5
Link_HIV_Care 10	To whom did you disclose your HIV status?	husband/wife /Sexual partner; Family Member; Friend/neighbour/colleague; Religious leader/; Health care; Other	1; 2; 3; 4; 5
Link_HIV_Care 11	What are the reasons why you did not register for ART care?	The clinic is too far; The hours of the clinic don't suit me; I did not have transport to go the clinic; I'm not interested in ART	1; 2; 3; 4;
Link_HIV_Care 12	Do you have your ART/HIV care card number?	Record number preferably from card; Card not available; Did not agree	1; 2; 3
Section 7: For partners reporting an HIV negative test result			
Link_HIV_Care 13	After your unreactive HIV self-test, did you go to the clinic to access HIV-related services?	No: Yes	0; 1

Link_HIV_Care 14	What services did you access?		
Link_HIV_Care 15	After your HIV negative result, did you go for VMMC services?	No because I'm already circumcised; No, Yes	1; 2; 3 (if No or Yes, go to Link_HIV_Care 19)
Link_HIV_Care 16	At what age were you circumcised?	< 5years of age; XX years	
Link_HIV_Care 17	When were you circumcised?	MM/YYYY	
Link_HIV_Care 18	What was the main reason why you were circumcised?	Tradition or religious; To protect myself against HIV; Hygiene; Other medical reason; Other (specify); Don't know	1; 2; 3; 4; 5; 6
Link_HIV_Care 19	After being referred, did you attend the VMMC clinic?	No Yes	1; 2
Link_HIV_Care 17	Why did you decide not to attend the VMMC clinic after being referred?	The clinic is too far; The hours of the clinic don't suit me; I did not have transport to go the clinic; I'm not interested in VMMC;	1; 2; 3; 4;
Link_HIV_Care 16	If yes, did you decide to get circumcised?	No, Yes,	0; 1
Link_HIV_Care 17	If yes, where was the circumcision done?	Health facility Home of a health worker/professional Circumcision done at home Ritual site	1; 2;

		Other home/place Don't know	
Finish	We have now come to the end of our questionnaire. Thank you very much for taking part in this study.		

Appendix 4. Qualitative Interview Guides and Observation form

Qualitative-Cohort: In-depth Interview for Index partner (first interview)

Thank you for taking time to speak with me today. My name is _____and I am working with Zambart a research organization. In order to increase the uptake of HIV services, HIV self – testing kits are being distributed at the ARTs clinic and ANC. We would like to hear what you think about this as well as what the community thinks. We will record the interview in order to make sure that we capture all of the valuable information that you share with me. We will also be taking down notes so that I do not forget what we have discussed. Please feel free to give honest answers as what we say is confidential. We will not record your name on the tape or on the notes that will be written and no one else will see the tape or the notes besides people who are working on this research project.

A. General information

1. (record sex of participant):
2. What year were you born?
3. Where do you live- zone/ section of the community?
4. What is your marital status?
5. How far did you go in your education?
6. What do you do for a living? What does your partner do for a living?
7. What is your religion?

B. Knowledge of HIV/ HIVST and attitudes towards testing for HIV?

1. Have you ever tested for HIV before? What methods did you use to test? What are the advantages and disadvantages of testing for HIV using this/ these method (s)?
1. How often do you test for HIV and why? It usually takes a long time/ a short time before you test, why? (Probing for attitudes). What about your partner, how often do they test?
2. How often do you come to access HIV services here and why? Have you ever come to access testing services from here with your partner? If so why, if not why

C. Community factors and stigma

1. What other testing services are available in this community?
2. How did the availability of other testing services other than HIVST affect your decision?
3. How did your anticipation of what people may say after you have tested using HIVST influence your decision? What do you expect people to say?
4. How did having these friends and family members influence your decision to accept/ decline of HIVST?
5. You were told about the advantages and disadvantages of HIVST? How did these apply to your situation? (Probe).

D. Knowledge of and experiences with secondary distribution of HIVST Kit

1. What do you think about HIVST?
2. How does it work or not work for you- in your situation? (probe for advantages and disadvantages)
3. You decided to accept/ decline offer of HIVST kit that you delivered to your partner, was there any reason why?
4. Before getting the test kit, did you ask for permission from your partner? If so, how did you do it? What was his response,
5. If he said yes, what was the reason behind him agreeing?
6. If he said no, did you go ahead to get him a test kit? Why did you do so?
7. How did your partner react to the fact that you accepted HIVST without consulting him/her? (describe in detail how your partner will react to the news that you have accepted HIVST- support, anger, will not care, violence)

E. Distribution of test kits

1. Why did you decide to come and collect the test kit from this distribution point?
2. What did you like about the location of this distribution point? (probe: distance from home, No stigma,)
3. What is it that you didn't like about the location of this distribution point? (probe: distance from home, stigma, being located within the clinic)
4. How did the location (within the clinic or within the community) improve or hinder your access of HIVST services? (probe)
5. How did the location (within the clinic or within the community) influence your decision to accept or reject HIVST? (probe)

Can you explain to me the how you managed to get the test kit? (Who and how it you ask for it, what were you told about the test?

F. Role of HCWs

1. How did the characteristics of person (man, woman, age) who distributed the HIVST influence your decision?
2. In your opinion is it alright for SFH staff/ HCWs to be distributing HIVST at this distribution point? What are the advantages and disadvantages?

G. Home environment (including Power and social relations)

1. When you reached home, how did you offer the test kit your partner? (Probe on the time of offer, what information was given out and the response)
2. You accepted/ rejected offer of HIVST. How did your relationship with your partner influence your decision?
3. Did your partner test after you offered him the test kit and explained how the test was to be done? How easy was it for you to explain to him how to use the kit? Did you face nay challenges, what was easy/difficult to explain? What about him, how did he find the testing process? Was it easy or difficult to test following instructions from you? Was there anything else that helped him with the testing(IFU, pictures on the IFU, your demonstrations)
4. Where did your partner test from? (Was it in your presence, alone, did he share results with you? Did you test as a couple)?
5. If you partner refused to test, was there any reason given? What do you think can make them test in the future?
6. Where there any beliefs that influenced your decision? What beliefs/ issues influenced your decision?

H. Social harms

1. After delivering the test kit to your partner, did you experience any problems?
2. Please describe any kind of problems you faced? For example: beaten, yelled at, denied sex, marriage break-up, not given money, being locked out, being neglected, or being threatened.
3. What do you think made your partner respond to you in such a way?

What is it that you think we can do to prevent such problems from happening aging in the future (probe: can home based counselling work,

I. Linkage to care:

1. After testing, did your partner share with you his results?
2. What was his next step after knowing his results?
3. **If the partner shared the results:** What advise did you give him concerning his results (probe on linkage to care if the participants shared the HIV positive results or on linkage to MMC for negative ones)
4. **If the results were positive**: did you advise him on getting linked to ART? What was his response? If he agreed, why did he do so? If not, why did he not want to get linked? If he got linked, how long did it take him to get up and go to the clinic? Did you go with him? What was the experiences of getting linked at the facility, where there any challenges that he or both of you faced? (Probe: was stigma a problem for you or for him, what about congestion?)

<u>If the results were negative,</u> did you encourage him about getting linked to MMC? What was his response? If he agreed, why did he do so? If not, why did he not want to get linked?

J. Promotion and social marketing

1. Had you heard about HIVST before today? Where did you hear it from?
2. Did having this information about HIVST before today influence your decision to accept or not to accept HIVST today?
3. How was this information presented to you/ community? In what ways can presentation (sensitization about) of HIVST information be done better in a community like yours and people like you

We have come to the end of the interview. Thank you

Qualitative-Cohort: In-depth Interview for Primary partner (first interview)

Thank you for taking time to speak with me today. My name is _____and I am working with Zambart a research organization. In order to increase the uptake of HIV services, HIV self – testing kits are being distributed at the ARTs clinic and ANC. We would like to hear what you think about this as well as what the community thinks. We will record the interview in order to make sure that we capture all of the valuable information that you share with me. We will also be taking down notes so that I do not forget what we have discussed. Please feel free to give honest answers as what we say is confidential. We will not record your name on the tape or on the notes that will be written and no one else will see the tape or the notes besides people who are working on this research project.

A. General information

1. (record sex of participant):
2. What year were you born?
3. Where do you live- zone/ section of the community?
4. What is your relationship with the person who gave you the test kit? Wife, living together?
5. How far did you go in your education?
6. What do you do for a living? What does your partner do for a living?
7. What is your religion?

B. Knowledge of HIV and attitudes towards testing for HIV?

1. You have decided to accept/ decline offer of HIVST, what other method (s) for testing for HIV do you know?
2. What are the advantages and disadvantages of testing for HIV using this/ these method (s)?
3. How often do you test for HIV and why? It usually takes a long time/ a short time before you test, why? (probing for attitudes)
4. How often do you come to access HIV services here and why?

C. Knowledge about HIVST

1. What do you know about HIVST?
2. How does it work or not work for you- in your situation? (probe for advantages and disadvantages)

D. Receiving kit from partner

I would like to learn more about your experience of receiving the HIVST kit from your partner

1. How did your partner tell you about the test kit? What is your view about how the test kit was given to you?
2. When offered the kit? What made you accept/refuse to test? How did the way this was done influence your decision?
3. How did receiving a kit from your partner make you feel? What thoughts came to your mind as you received the kit (probe about trust, about knowledge of own HIV status)
4. What was your immediate response to your partner's request of you testing? Probe: did you test or not? Did you test on your own or you tested as a couple?
5. Are there any beliefs that influenced your decision? What beliefs/ issues influenced your decision? (masculinity, religion, rumours about HIVST Kits)
6. Can you please describe to me what has happened after the kit was given to you? (probe if participant has tested, ask him/her to describe to you how they tested themselves, how easy or difficult was it to do the test, were the instructions easy to follow, any other challenges, what about reading and interpreting the results)

E. For those testing negative: ask the following questions:

1. After testing and reading of results, what did the client do?
2. Did you trust the results, or did you doubt them?
3. Did the client think of linking to MMC services (for male participants)?
4. How did the client dispose of the used test kit?
5. (For those who are negative) How easy or difficult was it to access prevention services- condoms, VMMC, PMTCT (for those who tested negative and are willing to share experience)

F. Linkage to care (only those who have used the test kit. Find out from the onset if participant is willing to talk about their HIV status)

1. After testing and reading of results, what did the client do?
2. Did you go to the facility for a confirmatory test? Tell us about your experience (what influenced your decision, where was the test conducted if it was done). Probe: why did you decide to conduct a confirmatory test? trust of test kit, partner support,
3. How easy or difficult was it to have a confirmatory test done? Probe: availability of testing services, location of testing services, stigma, attitude of HCWs,
4. In your opinion, are there barriers of linkage to confirmatory testing?
5. Did you get any form of counselling on linkage to care whilst getting a confirmatory test? After the confirmatory? What followed? Where you advised to start treatment? What decision did you make? Did you start treatment? If so, how long did it take for you to

decide and get linked to the clinic for treatment? Did you make this decision after self-testing or was it made after getting a confirmatory test?

   a. What other factors (things) facilitated your decision to start treatment? Probe:
   b. (For those who have not started treatment) What made you not to start treatment? Probe: distance to the clinic, congestion, fear of being seen? feeling healthy,

6. Do you think counselling is important for someone self-testing? If so why? Where you counselled about linking into care? Did this counselling help you decide to link into care?
7. **For clients that decided to link on their own after self-testing:** What was your experience with making the decision for getting linked without anyone counselling you? Do you think counselling in important?
8. In your opinion, what are the other barriers for linkage to care?
9. What can be done to help people who receive kits through their partner link to care?

G. Power, social relations and social harms

1. You accepted/ rejected offer of HIVST. How did your relationship with your partner influence your decision?

2. How has bringing of the test kit by your partner affected your relationship (probe on support, trust, anger, violence)

3. What role did your partner play as you tested using the test kit? How influential was your partner in the process? (Probe if the participant experienced forced testing, forced disclosure, was supervised during testing when they did not want to)

4. How is your relationship with your partner after they brought home the test kit for you? Probes: did you have any problems because of the test kits? What kind of problems did you have?

5. How can such incidents (Problems) be detected and recorded by us that are giving out the test kits?

6. How can such incidents be prevented in a home?

7. Where can one report such incidents?

We have come to the end of the interview. Thank you

Qualitative-Cohort: In-depth Interview for Index partner (second interview)

Recap of the last interview: Thank you for taking time to speak with me today. Last time we talked about to you about your experiences of receiving the test kit from your partner. Our discussion today is just a follow up to see how you are doing and what has changed after our first interview:

A. Social harms

For clients that experienced social harms

1. After you offered the test kit to your partner, you mentioned to us that this brought about some problem in your home. Apart from what you told us last time, did you experience any additional problems with your partner? (Probe: on the last harms that were reported) Has your relationship with your partner now changed in any way after our last discussion?
2. Looking back on what happened, how did you sort out these problems? (Probes: who did you consult? clinic staff, CHW, family members etc.)
3. Looking back on what happened, is there anything you can do differently if you were to deliver a test kit to your partner again?
4. What do you think brought about these problems? (probes: is it the HIVST kit, you are asking him to test? test results)
5. What kind of support do you think you and your partner need to help with these problems? (Where can you get it from and who can provide you with that kind of support? Probe on providers- CWH, Health care workers and the type of counselling needed(Telephone counselling, Individual counselling, Couple counselling, Family counselling
6. How best can we prevent these problems in other families?

For clients that did not experience social harms:

7. After you offered the test kit to your partner, you mentioned to us that this did not bring any problems in your home. How is the situation now from the last time we talked, did you face any problems with your partner because of you offering the test?
8. Has your relationship changed in any way after our last discussion?
9. **If the client did not experience any social harms:** Why do you think you did not experience any problems with you giving the test kit to your partner?
10. How best can we help families that have such problems?

B. Linkage to care Experiences of being on ART [for clients testing positive]

1. From the last time we talked, has your partner now linked to care? (probes:
2. What has been experiences with being on ART now? (probes: any challenges with adherence

3. How has your relationship changed now that he is on ART?
4. How does it feel for you who brought him the test kits and with it he tested and then got the results that he has now? [probes: do you feel guilty, happy that he is on ART now)
   If partner tested negative, ask:
5. Did your partner access prevention services- condoms, VMMC, PMTCT (for those who tested negative and are willing to share experience) Probe: where? From who?
6. Do you have anything to add or suggest?
7. We have come to the end of the interview.

We have come to the end of the interview. Thank you

Qualitative-Cohort: In-depth Interview for Index partner (second interview)

Recap of the last interview: Last time we talked about to you about your experiences of receiving the test kit from your partner. Our discussion today is just a follow up to see how you are doing and what has changed after our first interview:

A. Social harms

For clients that experienced social harms

1. After you were offered a test kit by your partner, you mentioned to us that this brought about some problem in your home. Apart from what you told us last time, did you experience any additional problems with your partner? (Probe: on the last harms that were reported)
2. Has your relationship with your partner now changed in any way after our last discussion?
3. What is it that made you and your partner experience these problems? (her/him giving the test kit to you, not getting permission from you before getting the kit, the way she delivered the test kit to you, suspecting you of cheating, was it the test results)

4. Looking back on what happened, how did you sort out these problems? (Probes: who did you consult? clinic staff, CHW, family members etc.)
5. Looking back on what happened, is there anything you can do differently now?
6. What kind of support do you think you and your partner need now to help with these problems? (Where can you get it from and who can provide you with that kind of support? Probe on providers- CWH, Health care workers and the type of counselling needed(Telephone counselling, Individual counselling, Couple counselling, Family counselling
7. How best can we prevent these problems in other families?

For clients that did not experience social harms:

8. After you were offered a test kit by your partner, you mentioned to us that this did not bring any problems in your home. How is the situation now from the last time we talked, did you face any problems with your partner because of you offering the test?
9. Has your relationship changed in any way after our last discussion?
10. Why do you think you did not experiences any problems with your partner after you were given a test kit?
11. How best can we help families that have such problems?

B. Linkage to care Experiences of being on ART [for clients testing positive]

1. From the last time we talked, have you now linked into care? (Probes: how long did it take for you to decide to start ART? how long did it take the clinic to start you on treatment?

2. What has been your experience with being on ART now? (probes: any challenges with adherence, challenges with access ART from the clinic)
3. Has your relationship changed now that he is on ART?

If tested negative, ask:

4. Did you access prevention services- condoms, VMMC, PMTCT (for those who tested negative and are willing to share experience) Probe: where? From who?

5. Do you have anything to add or suggest? Thank you

We have come to the end of the interview. Thank you

FGD for Secondary distribution models (ART and ANC)

FGD with Community Members for secondary Distribution Models

Thank you for taking time to speak with me today. My name is _____and I am working with Zambart. To increase the uptake of HIV services, HIV self – testing kits are being distributed at the ARTs clinic and ANC. We would like to hear what you think about this as well as what the community thinks. We will record the interview to make sure that we capture all the valuable information that you share with me. We will also be taking down notes so that I do not forget what we have discussed. Please feel free to give honest answers as what we say is confidential. We will not record your name on the tape or on the notes that will be written and no one else will see the tape or the notes besides people who are working on this research project.

A. Physical Factors

1. What do you think of the place (ANC and ART hub) where people collect the HIVST kit? (Probe: conducive, comfortable)
2. What do you think of the space where HIVST kit collection is being done? (Probe; appropriateness)
3. What do you think about the time of the distribution of kits? (Probe: is it ok, could it be changed, could you suggest the best time)

B. Community/Social factors and stigma

1. What other testing services are available in this community?
2. How did the availability of other testing services other than HIVST affect people's decision?
3. How does the anticipation of what people may say after someone tests using HIVST influence the decision? What do you expect people to say?

C. Process of delivering the kit to partner

1. How do you feel about this program of distributing kits through ANC/ART clinic?
2. What do people say about collecting kits for their partner from (ANC/ART CLINIC?)
3. How did women/men feel about being the ones to give their partner a kit? (Comfortable why, not comfortable why)
4. How did men/women feel about receiving a kit from their partner?
5. Why do you think people decided to collect the kit for their partners?
6. What are the advantages of collecting the kit for your partner?
7. What are the disadvantages of collecting the kit for your partner?
8. Describe how the process of giving kits to partners has been in the community

D. Power and social relations

1. Did the relationship among partners influence the decision to test?
2. How has bringing of the test kit by some partner affect relationships in the community (support, trust, anger, violence)
3. How do societal beliefs influence decisions? What beliefs/ issues influenced your decision? (Masculinity, religion,)

E. Equity

1. Who is accessing these services (Collecting of kits and using them?)
2. Why are they accessing the service?
3. Is there a group of people who want to access the service but are failing? (Why?)
4. What can the community do to help such people access the service?
5. What can the health workers do to help such people access the service?
6. Are certain groups of people accessing the kits more than the other?

F. Linkage to care

1. Do you think are people going for a confirmatory test? Can anyone share an experience (what influenced the decision, where was the test conducted if you have done it). Probe: trust of test kit, partner support,
2. How easy or difficult do you it is to have a confirmatory test done? Probe: availability of testing services, location of testing services, stigma, attitude of HCWs,
3. (For those who are negative) How easy or difficult was it to access prevention services-condoms, VMMC, PMTCT (for those who tested negative and are willing to share experience)
4. Do you know anyone who has started treatment because of secondary distribution?
5. (**For those who have started treatment**) What factors may have facilitated their decision to start treatment? Probe:
6. (**For those who have not started treatment**) What factors may have hindered their decision to start treatment? Probe:
7. In your opinion, what are the other barrier of linkage to confirmatory testing and care?
8. What can be done to help people who receive kits through their partner link to care?

G. Social harms

1. Where there any unfavourable outcomes of giving the self - test kit to a partner by a partner? (Probe experiences gender-based violence, humiliation, stigma or discrimination)
2. What role did partners play as their partners tested using the test kit? How influential were partner in the process? (Probe if the participant experienced forced testing, forced disclosure, was supervised during testing when they did not want to)
3. How can such incidents be prevented?
4. How can they be detected?

5. Where can one report such incidents?
6. What can the community do to prevent such harms?

H. Sustainability

1. How can we sustain the giving of kits through ANC and PLWHIV?
2. How can the community help in sustaining the different ways of distributing the kits?
3. What are the factors in the community that may cause these ways of distribution to be unsuccessful?
4. What do you think can be done to motivate the distributors?
5. What do you think are the demotivating factors?
6. In conclusion, are there any recommendations that you would like to share?

Thank you very much for the time you have spent in answering these questions today. Please remember that this information is confidential.

FGD with Community Members (Community led models)

Thank you for taking time to speak with me today. My name is _____and I am working with Zambart. To increase the uptake of HIV services, HIV self – testing kits are being distributed in the community. We would like to hear what you think about this as well as what the community thinks. We will record the interview to make sure that we capture all the valuable information that you share with me. We will also be taking down notes so that I do not forget what we have discussed. Please feel free to give honest answers as what we say is confidential. We will not record your name on the tape or on the notes that will be written and no one else will see the tape or the notes besides people who are working on this research project.

A. Physical Factors

1. What do you think of the place (refer to different collection points) where people collect the HIVST kit? (Probe: conducive, comfortable)
2. What do you think of the space where HIVST kit collection is being done? (Probe; appropriateness)
3. What do you think about the time of the distribution of kits? (Probe: is it ok, could it be changed, could you suggest the best time)

B. Community/Social factors and stigma

1. What other testing services are available in this community?
2. How did the availability of other testing services other than HIVST affect people's decision?
3. How does the anticipation of what people may say after someone tests using HIVST influence the decision? What do you expect people to say?

C. Process of delivering the kit to the secondary recipient

1. How do you feel about this program of distributing kits through (ANC, ART, Tuntemba, work place clinic?)
2. What do people say about collecting kits for their partner from (ANC, ART, Tuntemba, work place?
3. In your opinion, how did women/men feel about being the ones to give their partner a kit? (Comfortable why, not comfortable why)
4. In your opinion, how did men/women feel about receiving a kit from their partner?
5. Why do you think people decided to collect the kit for their partners?
6. In your opinion, what are the advantages of collecting the kit for your partner?
7. What are the disadvantages of collecting the kit for your partner?
8. Describe how the process of giving kits to partners has been in the community

D. Equity

1. Who do you think is accessing these services (Collecting of kits and using them?)
2. Why are they accessing the service?
3. In your opinion, is there a group of people who want to access the service but are failing? (Why?)
4. In your opinion, what can the community do to help such people access the service?
5. In your opinion, what can the health workers do to help such people access the service?
6. Are certain groups of people accessing the kits more than the other?

E. Linkage to care

1. Do you think are people going for a confirmatory test? Can anyone share an experience (what influenced the decision, where was the test conducted if you have done it). Probe: trust of test kit, partner support,
2. How easy or difficult do you it is to have a confirmatory test done? Probe: availability of testing services, location of testing services, stigma, attitude of HCWs,
3. (For those who are negative) How easy or difficult was it to access prevention services-condoms, VMMC, PMTCT (for those who tested negative and are willing to share experience)
4. Do you know anyone who has started treatment as a result of secondary distribution?
    a. (For those who have started treatment) What factors may have facilitated their decision to start treatment? Probe:
    b. (For those who have not started treatment) What factors may have hindered their decision to start treatment? Probe:
5. In your opinion, what are the other barrier of linkage to confirmatory testing and care?
6. What can be done to help people who receive kits through their partner link to care?

F. Social harms

1. Where there any unfavourable outcomes of giving the self - test kit to a partner by a partner? (Probe experiences gender-based violence, humiliation, stigma or discrimination)
2. How can such incidents be prevented?
3. How can they be detected?
4. Where can one report such incidents?
5. What can the community do to prevent such harms?

G. Sustainability

1. How can we sustain the giving of kits through ANC, PLWHIV, and Shops?
2. How can the community help in sustaining the different ways of distributing the kits?
3. What are the factors in the community that may cause these ways of distribution to be unsuccessful?
4. What do you think can be done to motivate the distributors?
5. What do you think are the demotivating factors?

6. In conclusion, are there any recommendations that you would like to share?

Thank you very much for the time you have spent in answering these questions today. Please remember that this information is confidential.

IDI for community led models

Thank you for taking time to speak with me today. My name is _____and I am working with Zambart. In order to increase the uptake of HIV services, HIV self – testing kits are being distributed in the community. We would like to hear what you think about this as well as what the community thinks. We will record the interview to make sure that we capture all the valuable information that you share with me. We will also be taking down notes so that I do not forget what we have discussed. Please feel free to give honest answers as what we say is confidential. We will not record your name on the tape or on the notes that will be written and no one else will see the tape or the notes besides people who are working on this research project.

A. General information

1. (record sex of participant)
2. What year were you born?
3. Where do you live- zone/ section of the community?
4. What is your marital status?
5. How far did you go in your education?
6. What is your religion?

B. Knowledge of HIV/ HIVST and attitudes towards testing for HIV?

1. What methods of HIV testing do you know?
2. What are the advantages and disadvantages of testing for HIV using this/ these method (s)?
3. How often do you test for HIV and why? It usually takes a long time/ a short time before you test, why? (probing for attitudes)
4. How often do you come to access HIV services and why?

C. Location and lay-out of distribution points, including community social and physical features

1. What do you like about the location of the kantemba/hub distribution point? (probe)
2. What didn't you like about the location of distribution kantemba/hub point? (probe)
3. How did the location improve or hinder your access of HIVST services? (probe)
4. How did the location influence your decision to accept or reject HIVST? (probe)
5. What could be done to improve this service?

D. Linkage to care

1. How easy or difficult do you think it is to have a confirmatory test done? Probe: availability of testing services, location of testing services, stigma, attitude of HCWs,
2. (For those who are negative) How easy or difficult was it to access prevention services- condoms, VMMC, PMTCT (for those who tested negative and are willing to share experience)
3. Do you know anyone who has started treatment as a result of kantemba/ community hub distribution?
    a. (**For those who have started treatment**) What factors may have facilitated their decision to start treatment? Probe:
    b. (**For those who have not started treatment**) What factors may have hindered their decision to start treatment? Probe:
4. In your opinion, what are the other barrier of linkage to confirmatory testing and care?
5. What can be done to help people who access kits through the community hubs link to care?
6. Do you have anything to add?

We have come to the end of our interview, thank you very much for your time.

IDI guide for health care workers

Thank you for taking time to speak with me today. My name is _____and I am working with Zambart a research organization. To increase the uptake of HIV services, HIV self – testing kits are being distributed at the ARTs clinic and ANC. We would like to hear what you think about this as well as what the community thinks. We will record the interview to make sure that we capture all the valuable information that you share with me. We will also be taking down notes so that I do not forget what we have discussed. Please feel free to give honest answers as what we say is confidential. We will not record your name on the tape or on the notes that will be written and no one else will see the tape or the notes besides people who are working on this research project.

A. HIV-Self testing

1. What is your understanding of HIV self-testing?
    a. Definition
    b. Procedures
        i. Processes for sample collection, analysis, and interpretation of results
    c. Do you feel you have good understanding of all aspects related to self-testing?
        i. What is the source of your current knowledge on self-testing?
        ii. In what instances are confirmatory tests required?
        iii. What sort of information/training would you need to better support self-testing patients/participants?

B. Evaluating the model

1. What do you think about (community-based, ANC, PLWHIV, Tuntemba) distribution of HIV self-test kits?
    a. Is it a good/bad thing? Please explain
    b. How can it be made better?
    c. How would you prefer that self-test kits are distributed?
    d. What impact has self-testing had in the communities that you serve?
    e. Positive impact? Please explain
    f. Negative impact? Please explain
2. What are the barriers and facilitators to self-testing
    a. From the points of view of health care workers like yourself
    b. From the community/clients' perspectives?
3. What are your views on the ANC, PLWHIV HIV self-testing model?
    a. Will it increase uptake of HIV testing (compared to provider-delivered testing)?
        i. What sorts of people are using this self-testing service?
4. What type of people are not using the service and why?

C. Linkage to care

1. What are your views on linkage to prevention and care services after self-testing? Do you think people will link as well, or better, or worse than if they were tested by providers?
    a. Linkage to medical male circumcision for HIV negative males
    b. Linkage to HIV treatment/care for those who test HIV positive
    c. What is your role in linking people to care and preventive services?
    d. What are the barriers to linking to care in this model?
    e. What are the facilitators to linking to care?

D. **Social harms**

1. What are your views on social harms due to self-testing?
    a. Do you think self-testing will have higher rates of social harms compared to provider-delivered testing? What sorts of harms do you think could result?
        I. Forced testing?
        II. Gender based violence?
    b. Have you experienced any harm because of distributing kits to clients?
    c. Are there any unfavourable outcomes because of people collecting kits for their partners in this community?

E. Sustainability

1. How can we sustain the giving of kits through ANC, PLWHIV, and Shops?
2. How can the community help in sustaining the different ways of distributing the kits?
3. What are the factors in the community that may cause these ways of distribution to be unsuccessful?
4. What do you think can be done to motivate the distributors?
5. What do you think are the demotivating factors?
6. In conclusion, are there any recommendations that you would like to share?

We have come to the end of our interview, thank you very much for your time.

IDI guide for community led distributors

Thank you for taking time to speak with me today. My name is _____and I am working with Zambart a research organization. In order to increase the uptake of HIV services, HIV self – testing kits are being distributed in the community (tuntemba). We would like to hear what you think about this as well as what the community thinks. We will record the interview in order to make sure that we capture all of the valuable information that you share with me. We will also be taking down notes so that I do not forget what we have discussed. Please feel free to give honest answers as what we say is confidential. We will not record your name on the tape or on the notes that will be written and no one else will see the tape or the notes besides people who are working on this research project.

A. HIV-Self testing

1. What is your understanding of HIV self-testing?
    a. Definition
    b. Procedures
        i. Processes for sample collection, analysis, and interpretation of results
    c. Do you feel you have good understanding of all aspects related to self-testing?
        i. What is the source of your current knowledge on self-testing?
        ii. In what instances are confirmatory tests required?
        iii. What sort of information/training would you need to better support self-testing patients/participants?

B. Evaluating the model

1. What do you think about (community-led, ANC, PLWHIV, Tuntemba) distribution of HIV self-test kits?
        i. Is it a good/bad thing? Please explain
        ii. How can it be made better?
        iii. How would you prefer that self-test kits are distributed?

    b. What impact has self-testing had in the communities that you serve?
        i. Positive impact? Please explain
        ii. Negative impact? Please explain
2. What are the barriers and facilitators to self-testing
    a. From the points of view of health care workers like yourself
    b. From the community/clients' perspectives?
3. What are your views on the community led distribution self-testing model?
    a. Will it increase uptake of HIV testing (compared to provider-delivered testing)?

        iv. What sorts of people are using this self-testing service?
        v. What type of people are not using the service and why?

C. Linkage to care

1. What are your views on linkage to prevention and care services after self-testing? Do you think people will link as well, or better, or worse than if they were tested by providers?
    a. Linkage to medical male circumcision for HIV negative males
    b. Linkage to HIV treatment/care for those who test HIV positive
    c. What is your role in linking people to care and preventive services?
    d. What are the barriers to linking to care in this model?
    e. What are the facilitators to linking to care?

D. **Social harms**

1. What are your views on social harms due to self-testing?
    a. Do you think self-testing will have higher rates of social harms compared to provider-delivered testing? What sorts of harms do you think could result?
        i. Forced testing?
        ii. Gender based violence?
    b. Have you experienced any harm as a result of distributing kits to clients?
    c. Are there any unfavourable outcomes as a result of people collecting kits for their partners in this community?

E. Sustainability

1. How can we sustain the giving of kits through ANC, PLWHIV, and Shops?
2. How can the community help in sustaining the different ways of distributing the kits?
3. What are the factors in the community that may cause these ways of distribution to be unsuccessful?
4. What do you think can be done to motivate the distributors?
5. What do you think are the demotivating factors?

Do you have any questions or are there other things which are related to this topic that you would like to talk about?

IDI (community led models)

Thank you for taking time to speak with me today. My name is _____and I am working with Zambart a research organization. In order to increase the uptake of HIV services, HIV self – testing kits are being distributed at the ARTs clinic and ANC. We would like to hear what you think about this as well as what the community thinks. We will record the interview in order to make sure that we capture all of the valuable information that you share with me. We will also be taking down notes so that I do not forget what we have discussed. Please feel free to give honest answers as what we say is confidential. We will not record your name on the tape or on the notes that will be written and no one else will see the tape or the notes besides people who are working on this research project.

A. General information

1. (record sex of participant):
2. What year were you born?
3. Where do you live- zone/ section of the community?
4. What is your marital status?
5. How far did you go in your education?
6. What is your religion?

B. Knowledge of HIV/ HIVST and attitudes towards testing for HIV?

1. What methods of HIV testing do you know?
2. What are the advantages and disadvantages of testing for HIV using this/ these method (s)?
3. How often do you test for HIV and why? It usually takes a long time/ a short time before you test, why? (probing for attitudes)
4. How often do you come to access HIV services and why?

C. Location and lay-out of distribution points, including community social and physical features

1. What do you like about the location of the kantemba/hub distribution point? (probe)
2. What didn't you like about the location of distribution kantemba/hub point? (probe)
3. How did the location improve or hinder your access of HIVST services? (probe)
4. How did the location influence your decision to accept or reject HIVST? (probe)
5. What could be done to improve this service?

D. Linkage to care

1. How easy or difficult do you think it is to have a confirmatory test done? Probe: availability of testing services, location of testing services, stigma, attitude of HCWs,
2. (For those who are negative) How easy or difficult was it to access prevention services- condoms, VMMC, PMTCT (for those who tested negative and are willing to share experience)
3. Do you know anyone who has started treatment as a result of kantemba/ community hub distribution?
4. (**For those who have started treatment**) What factors may have facilitated their decision to start treatment? Probe:
5. (**For those who have not started treatment**) What factors may have hindered their decision to start treatment? Probe:
6. In your opinion, what are the other barrier of linkage to confirmatory testing and care?
7. What can be done to help people who access kits through the community hubs link to care?
8. Do you have anything to add?

We have come to the end of our interview, thank you very much for your time.

IDI work place model

Thank you for taking time to speak with me today. My name is _____and I am working with Zambart a research organization. In order to increase the uptake of HIV services, HIV self – testing kits are being distributed at work places. We would like to hear what you think about this as well as what the community thinks. We will record the interview in order to make sure that we capture all of the valuable information that you share with me. We will also be taking down notes so that I do not forget what we have discussed. Please feel free to give honest answers as what we say is confidential. We will not record your name on the tape or on the notes that will be written and no one else will see the tape or the notes besides people who are working on this research project.

A. General information

1. (record sex of participant):
2. What year were you born?
3. Where do you live- zone/ section of the community?
4. What is your marital status?
5. How far did you go in your education?
6. What is your position

B. Knowledge of HIV/ HIVST and attitudes towards testing for HIV?

1. What methods of HIV testing do you know?
2. What are the advantages and disadvantages of testing for HIV using this/ these method (s)?
3. How often do you test for HIV and why? It usually takes a long time/ a short time before you test, why? (probing for attitudes)

C. Location and lay-out of distribution points, including community social and physical features

1. What do you like about the location of the workplace distribution point? (probe)
2. What didn't you like about the location of the work place distribution point? (probe)
3. How did the location improve or hinder your access of HIVST services? (probe)
4. How did the location (within the work place) influence your decision to accept or reject HIVST? (probe)
5. What could be done to improve this service?

D. Power and social relations

1. How did what society believe in influence your decision? What beliefs/ issues influenced your decision?

Observation Tool

Observation of delivery of HIVST (ANC/ART)

1. Please describe the location where the ANC/ART is located. Please note the layout of the buildings, patient flow. Please take note of people present (men *or women; average age; children; health; economic status)* etc.; is the clinic integrated or are services offered separately; Aare there any distinguishing features or services that make people to be identified? What other distinguishing features of interest to HIVST are there? In your opinion is there any feature that might influence HIVST decisions?

2. Please describe how the test kits are given out to clients. Please describe how the test kits are distributed. Is it done in the open or in a confidential space; how free are clients to come and collect the test kits; what kind of information is given out concerning usage of the kits; what time are kits given out (what time do people come to collect?), what gender and age of clients come to collect the test kits; is adequate information given; what is the immediate reaction from the client when given the kit?

3. Clients are asked to go and give the test kits to another person at their home. Do people accept to collect these kits? Are there men that collect test kits for their partners? How easy is it for women to collect test kits for their partners? How to the health staff explain this? Do clients ask any questions and if so, what kind of questions did they ask in relation to secondary distribution? How free are women to collect the test kits for their male partners? What questions did the clients have concerning the HIVST process? Did the health care workers discuss any potential social harms with the client, so what was the response from the clients?

4. When offered the test kit, were there any clients that wanted to test at the facility? Where did the client test from?

5. If the client tested from the ANC/ART Clinic, what assistance did the client ask for regarding use of the HIVST kit? Were there any other questions asked by the client regarding the use of the KIT? Probes, Pre-test counselling (demonstration on how to use, help with reading IFU) post-test counselling (Information on linkage to care in case of a positive result, social harms)

6. Is there anything else you would to add

Observation checklist for secondary distribution (ANC/ART)

	Characteristics/ features to observe	
1	Location of the distribution point at the clinic	
2	Distinguishing features of the distribution points in relation to other points within the clinic	
3	Process of HIVST kit distribution	
4	Characteristics of individuals collecting HIVST kits	
5	Communication between distributor and individuals collecting the kits	
6	Points of discussion/ communication (if were able to hear any) between distributors and individuals collecting the kits	
7	Testing location (places people prefer to use to conduct HIVST within the clinic)	
8	Assistance self –testers request and why	
9	Complaints/ good things self-testers say about the location	
10	Complaints/ good things self-testers say about HIVST process at the clinic	

Observation tool

Observation of workplace distribution model

1. Please describe the work place. (probes: type of organization, location, social economic class of employees, residential place where employees come from, age groups and gender of employees) In your opinion is there any feature that might influence HIV testing decisions? Is the room providing the HIV service stigma free?
2. Please describe how the HIV test kits are distributed? (what kind of information is given if any, who distributes, at what time, what is the reaction of the client, was adequate information given)
3. How is the quality of counselling provided by the distributor? Use of space. (Privacy/confidentiality, use of flipchart, demonstration of how use of the test kit etc.).
4. What reason did the client give for collection of the kit (probe: convenience, stigma, dislike for finger prick, health service problems e.g. long queues, congestion, stigma) what gender and age come to collect the HIV self - test kit?
5. When offered the test kit, where did the client test from?
6. If the client tested from the work place, what help did the client ask for regarding use of the HIV self-test kit? What kind of assistance did the client ask for (Probe: Pre – test counselling (demonstration, help with reading IFU) Post- test (Information on linkage to care in case of a positive result)
7. What did the distributor do to encourage linkage?
8. Did the client have any questions concerning the testing
9. Is there anything else you would like to add

Observation Tool

Observation of delivery of HIVST Community led models (hubs, kantemba, and shops)

7. Please describe the location where the community hub (shop, kantemba) is located. Please note the layout of the buildings, and flow/ movements of clients. Please take note of people present (men *or women; average age; children; health; economic status)* etc. Are there any distinguishing features or services that make people to be identified? What other distinguishing features of interest to HIVST are there? In your opinion is there any feature that might influence HIV-self testing decisions?

8. Please describe how the test kits are given out to clients. Please describe how the test kits are distributed by the community distributor (shop owner etc)? Is it done in the open or in a confidential space; how free are clients to come and collect the test kits from the community hubs; what kind of information is given out concerning usage of the kits; what time are kits given out (what time do people come to collect?);, what gender and age of clients come to collect the test kits; is adequate information given; what is the reaction from the client when given the kit?

9. When offered the test kit, were there any clients that wanted to test right at the hubs, shops?? Where did the client test from?

10. **I**f the client tested from the hub, kantemba, shop? What help did the client ask for regarding use of the HIV self-test kit? Did the client get the help? Probes, Pre-test counselling (demonstration on how to use, help with reading IFU) post-test counselling (Information on linkage to care in case of a positive result, social harms)

11. Were there any other questions asked by the client regarding the use of the KIT?

12. Is there anything else you would like to add

Observation checklist for community led

	Characteristics/ features to observe	
1	Location of the distribution point within the community	
2	Distinguishing features of the distribution point in relation to other points/ places within the community	
3	Characteristics of individuals distributing the test kits	
4	Characteristics of individuals collecting HIVST kits	
5	Process of HIVST kit distribution	
6	Roles played by the distributor (recordkeeping, information giving, demonstration, counselling and education, facilitating linkage)	
7	Communication between distributor and individuals collecting the kits	
8	Availability of records (type of records kept)	
9	Availability of testing room/ space	
10	Disposal of waste	
11	Stocks	
12	Use of aids in communication	
13	Points of discussion/ communication (if were able to hear any) between distributors and individuals collecting the kits	
14	Assistance self –testers request and why	
15	Complaints/ good things self-testers say about the location	
16	Complaints/ good things self-testers say about HIVST process at the community point	

Mapping Tool

Group Discussion Guide (NHC)

Time: 1 hours maximum

1 exercises

Community mapping

Participants:

8-12 members of the Health Committee, mix of men and women

Venue

Community venue that offers privacy (free of distractions). These activities could be conducted in the health centre.

Seating arrangements:

if possible arrange chairs in a semi-circle, without tables.

Materials:

Flipchart

Marker Pens

Scissors/Razor blade

Sticky stuff

Facilitator Notebook

Pencils

Consent forms

Information sheets

AAA size batteries

Digital recorder

A4 envelopes

Preparations:

General

- Drinks and snacks for the participants and facilitators.
- Table of participant details pre-drawn on A4 paper to save time.
- Cards with natural numbers on them to use as identity during discussion i.e. as 1,2,3,4,5,6,7,8,9.

Mapping

- Cards written with different places: bar, shops, tuntembas, clinic, church, guest house, bus station, salons
- Some blank cards
- 2 Flipcharts taped together.

Procedures:

Participant characteristics

As you wait for participants to arrive, one facilitator should go around the circle, and, for each participant, record the following: Participant number, Age, Sex, and Marital Status, number of children, source of income, church, and length of time resident in site.

Please note this should be done by the facilitator, not filled in by participants themselves. This should be done before the introduction, with the exception of latecomers.

Introduction [15 minutes]

We have selected all of you to represent your community here as we really value what you as the Neighbourhood Health Committee can share with us about your experiences of living in this community. Although we will not be providing money, we will be providing a drink and a snack during the discussion.

ADMINISTER INFORMATION SHEET AND INFORMED CONSENT

[EXPLAIN THE FOLLOWING]

Ask: Which language are you most comfortable using?

- This will be a 1 hour activity.
- We want it to be as participatory as possible. We want to hear your views. There are no right or wrong answers.
- Please feel free to give your ideas and also give a chance to everyone to speak.
- You may have different ideas from others – that's okay – we want to hear them.
- Any question you feel uncomfortable about, please feel free not to answer it.
- Your names will be kept confidential – when we write up the discussion, we never use people's real names.
- We will be happy to answer any questions you have at the end of the discussion
- Please put your cell phones on silent if possible

- Is it ok with you if we start the discussion?

NOTE: RECORD THE TIME ACTIVITY STARTS

Community Resource mapping (45 minutes)

1. Stick the big flipchart on the wall, or place on a table or floor so that everyone can stand around it.
2. Explain that you would like the group to make a map of the community. It does not have to be accurate, but it needs to show some of the main features and places that people go to.
3. Start with the 'Clinic' card and ask someone to put it on the map. Lay out all the other cards- including the blank cards and hand out markers and sticky stuff. Ask the group to now stick the cards to show where the places are. They can write or draw new cards for other places, or draw directly on to the map.
4. Ask if anyone can draw in some key roads or rivers or other key features.
5. Ask if they can show the entry and exit points- where people *come into* the community and where they *go out?*

Leave the group to build their map by adding any other key features that are found in the community - allow at least 15 minutes for this.

6. Now explain that you will be doing a walk around the community tomorrow. The focus of your research is on HIV self-testing which is being delivered in people's homes by CHIPs.

    I. -Ask - What are some of the key places or features that may have an influence on or affect the uptake of HIVST that you think are important for us to see on the walk? *Probe for reasons why these places or features have been identified*

    II. -Ask- We also want to know where people buy their medicines, where people go for their HIV testing; where the counselling services are available? etc.

    III. -Ask- -We also want you to tell us about the social, cultural and physical differences that exist in your community? *Probe about any differences between zones from a social, cultural and economic perspective that may have an influence of HIVST-i.e. What is it that is in this zone which is not in the other zones? Give details as to what kind of houses are there, what people do in the different zones to earn a living, do they work within or outside the community, the different social economic classes that are found in the different zones, where and who do people interact with either in groups or individuals, what trading spaces, recreational spaces, other organisations or facilities and other testing services are there.,*

    IV. -On the structure of the clinic, ask about its building structure, location of the VCT clinic and anything else that goes on at the clinic or is found at the clinic that may have an influence or effect on the uptake (or acceptability) of HIVST.

    V. -Self-testing is not being implemented in all zones, do you think this will affect how community members respond when they see that there friends are not being offered the service (those in control zone)?

7. Ask participants to mark them on the map and find out why they have been identified. Refer to the transect walk observation checklist below [Stress the places that could be linked to HIV self-testing)

Check if there are any other additions from the group about what they think the researchers should know about the community. Thank the participants.

Mapping/ Transect Walk Observation Checklist

Places
1 Health facility
1.1 Formal
1.2 Informal
2 Other places linked to HIV testing and treatment
2.1 Pharmacies
2.2 Drug stores
2.3 Trading places/ stores that sell drugs, syringes etc
3 Place of worship (what denomination?)
4 Recreational spaces
4.1 Library/ schools
4.2 Sports venue/ open ground
4.3 Disco
4.4 Community hall
4.5 Video club
4.6 Other
5 Alcohol outlet
5.1 Bar
5.2 Night club
5.3 Shebeen (informal)
5.4 Lodge
5.5 Other

6 Commercial Premises
6.1 Market area
6.2 Shop
6.3 Beauty salon
6.4 Shop selling pharmaceuticals
6.5 Stall selling pharmaceuticals
6.6 Other
7 Stations / bus stops
7.1 Bus
7.2 Mini Bus
7.3 Railway
7.4 Taxi rank
7 NGO
9 School
10 Residential housing (what type?)
11 Boundary landmark
12 Police Post
13 Other (AS SUGGESTED BY LOCAL EXPERTS)

Notes:

1. TIME
2. TYPE OF PLACE (see list of places above)
3. STRUCTURE OF BUILDING – large / small (estimate in metres); new / old; cramped / spacious; well ventilated / not well ventilated (explain why); temporary / permanent; building materials – brick, concrete, grass, mud; etc.
4. PEOPLE - busy / quiet; estimate number of men / women / children; estimate average age of children / youth / adults / elderly present
5. ACTIVITY - what is happening? (E.g. playing football, watching a video, waiting, drinking etc.). Also if there is an event (e.g. football match, fight, outreach education etc), note this.
6. RELEVANCE TO HIV/ HIVST – note or sketch briefly of particular relevance and write up in more detail later. Note areas where HIV testing is done, where people go for treatment, where people access drugs etc.
7. Record all the words for HIV or ARVs or HIV testing (vernacular, English, slang, street language) that you have heard during this observation

Transect Walk Guide

Objectives:

1. Observations of the range of HIV services.
2. Observe activities and movement of different social, age and gender groups.
3. Observe interactions between people and between people and activities
4. Gain a rapid understanding of places of significance to the management of HIV, including any areas where HIV mobile testing is held.
5. Identify places that pharmaceutical drugs and items are sold.

RA Roles: Both RAs to chat to local people during the transect walk.

Materials: Transect Walk Guide, map of community with transect walk plotted on (drawn by neighbourhood health committee), GPS, GPS Data Capture Sheet (see tools), Transect Walk Observation Guide, few sheets of A4 paper, notebook, pens.

Time of Activity: Afternoon and Morning.

Length of Activity: One afternoon and one morning.

Venue: No venue; rather going in concentric circles from the 'centre' of community and also following the lead from social and resource maps earlier drawn by participants of FGDs

Flow:

At the start:

- Set off from health centre and move from there from place to place using the administrative divisions of the community such as zones and or sections as a guide.

During the walk:

1. Observe the places passed, noting conditions in different sub-areas and housing clusters, activities and movements of people and livelihood options.
2. Ask others who they pass probing questions about the different housing clusters and important places in the area with regard to managing HIV in this place, including testing

options and specifically if they have heard about HIVST. Make rough notes or sketches in the notebook.

3. Look out for the types of places suggested by the Transect Walk List of Places i.e. health facilities, commercial premises, places of worship, recreational spaces, boundary landmarks, graveyard, etc (see TRANSECT WALK OBSERVATION CHECKLIST). Stop at each such place.
4. Look out for places where mobile HIV testing is held and where HIV testing is more frequently available. And where HIVST could be conducted.
5. Note any stalls/ tuntembas, shops and market areas where pharmaceutical products are sold.
6. For each place:

    a. The waypoint number and coordinates are recorded on the GPS DATA CAPTURE SHEET.
    b. The type of place (selected from the TRANSECT WALK OBSERVATION CHECKLIST) and the name of this particular place (if applicable) are indicated.
    c. A description is given of: type of gathering place; size of building; what people are doing; the approximate number of people; the age mix of people there.
    d. Assess whether the place is a possible observation point to return to on the following days.
    e. If people ask, explain that the team are doing this for the purposes of understanding the community before a new HIV project begins. Engage in brief informal conversation, making field notes afterwards.

Data Collected and Stored:

1. Make a rough sketch of the transect walk on blank A4 paper, indicating all the places plotted and observed during the walk.

2. Complete the Transect Walk Activity Report Form on the same days as carrying out the walks, describing the process and the findings (from notes made in the note book) as they relate to activities and mobility of people and perceptions of HIV transmission, testing and prevention.

3. Record all the words for HIV/ ARVs/ HIVST (vernacular, English, slang, street language) that you have heard during this observation.

4. Record any discussions specific to HIV testing and HIV self-testing.

Transect Spiral Walk ACTIVITY REPORT FORM

1. Date and place conducted:
2. Time taken and rough estimate of distance:
3. Observation of Place not captured in the Data Capture Sheets including: what people are there (ages, gender, local/not local); relevant IEC material/other visuals; activities during the day; movement of people; interactions between people; activities; gossip; entry/exit points: (use an extra pieces of paper to sketch any maps if helpful and attach)
4. Any observations of places/activities of significance to HIV transmission:
5. Any observations of places/activities of significance to HIV testing, drug marketing and distribution
6. Any information specifically on range, type of health services related to HIV:
7. Any information specifically on HIV/ HIVST testing:
8. Any information on HIV counselling:
9. Any information social harms related to HIV/ HIVST testing:
10. Record any words/phrases you have heard people use to talk about HIV, HIV testing, ART, counselling, and social harms (English, slang, vernacular, street etc…):
11. Any additional observations of relevance:

Stakeholder Analysis Discussion Guide/ IDI

Purpose: To identify HIVST CS stakeholders and map their activities vis-à-vis those of the HIVST CS.

Objectives:

1. To describe popular understandings of HIV/ HIVST among stakeholders in HIVST CS communities
2. To describe the strategies and processes supporting implementation of HIV/ HIVST-related services in the communities
3. To explore perceptions HIV/ HIVST treatment and care from stakeholders' perspectives
4. To describe the influence of HIV/ HIVST-stigma on the uptake and adherence to HIV/ HIVST treatment from a stakeholder 'perspective
5. To explore the interaction between the stakeholders and the potential interactions between stakeholders and the HIV/ HIVST study.

Form of data recording: (1) Audio-recording of all talk from "Preamble" to "Closing". (2) Notes of key points per topic area handwritten by the facilitator into a printed copy of this document. (3) Photographs of each of the activities. (4) Handwritten notes by participants during the discussion.

Expected time needed: 45 minutes

Date activity conducted: _____

Place conducted: _____

Time period: _____

Preamble (to be read by facilitator): Today is the ([insert date] and it is [insert time]. This is a discussion with an implementing staff at (XXXX) Clinic. Thank you for your time. All information collected here will be reported anonymously. May I remind you that we are audio recording this discussion and ask that you speak loudly and clearly. As the facilitator, I will also be taking some notes. Do you have any questions before we begin?

INTRODUCTION [2 minutes]

We have selected all of you to represent your community because of the role you play related to provision of HIV/ HIVST services. We ask you to be free to share as much as can during the discussion/ meeting.

Topic Area 1 **– Description of Stakeholder**

(Facilitator to read bolded text below and elaborate with prompts at their discretion)

Activity: Stakeholder Profile

Open the meeting with a short 'presentation' on what HIV/ HIVST is and allow for time to respond to questions the stakeholders may have.

Variable	– **Task**	**Objectives**
Name	– Distribute plain coloured cards (half of A4 size) to each stakeholder participant. – Ask them to write the name of the organization they are representing on top of the paper. – Below it ask them to write the year they started working in the HIVST CS community.	Identify stakeholders
Period	– Collect the papers from the participants and stick them on a wall according to the year they started working in the community.	Period service delivery
Involvement	– Give them A4 size paper to write/list the activities or services they provider in bullet form. – Collect the papers and stick them below the earlier paper with name of stakeholder and the year –leave small space in-between.	Whether HIV/ HIVST service delivery is primary objective
Interest	– Ask them to list HIV/ HIVST activities or services they provide in the community, or what they do to assist their clients/patients' concern on HIV/ HIVST (List HIV/ HIVST activities/services). – After they list down, collect the papers and place them under the organisations'' names on the wall.	Whether HIV/ HIVST service delivery is secondary/tertiary objective
Influence	– Ask them if they work together with other organizations in any way on HIV/ HIVST related activities (should write this on separate A4 papers). – Ask them to write about how they think HIV/ HIVST will influence their work; positive/negative? – Ask them if they at all worked or collaborated with the CHiPs on HIV/ HIVST activities. – If any of the stakeholders did, ask them to list the role they played with the CHiPs (should write this on separate paper). – List other stakeholders not present.	Influence of stakeholder on HIV/ HIVST service delivery in the community.
Alignment	– Ask them to explain the groups, age, gender, and areas they work with/ from in the community.	Groups targeted and not targeted

After the stakeholder profile activity has been completed you may ask questions from the topic areas below to complement information gathered above. If it is not possible to gather all the required information for all the stakeholders, schedule specific meetings with the affected stakeholders as well as those that were not present.

Topic Area 2 – **HIV/ HIVST specific activities**

1. **Do you do any HIV/ HIVST related activities?** What do you do? Why? When do you do them? Do you work with the clinic? How long have you worked with the clinic?
2. **How has working in this community been**? Do you specifically work with HIV/ HIVST patients? How do you identify them? Are there any specific places where these people are found? Do you find it challenging working with them? Why?
3. **Do you give any kind of support to HIV/ HIVST patients**? What do you give? When do you give?
4. **Which HIV/ HIVST programs have you done in the past**? What were you trying to achieve? What worked well/ did not work well? What do you think would have been done better? Which HIV/ HIVST programme are you implementing now? Do you collaborate with other organisations in your implementation? Which organisations are those? Why?
5. **Are there any other organisations which conduct HIV/ HIVST related activities you know of in this community**? Do they come from outside the community? Where do they work from? Who do they work with? What kind of activities do they do? How long have they worked in this community?

Topic area 3 – **Knowledge, Training and Experience**

1. **How have HIVST CS activities (i.e. anything to do with HIVST CS) affected activities (i.e. anything to do with HIV/ HIVST treatment and care) in the community?** Do you think that HIVST CS HIV/ HIVST screening increased the number of people diagnosed and treated for HIV/ HIVST at the clinic? Were any other people/organisations involved in the implementation of HIV/ HIVST treatment provision? Please describe these people/organisations and what they did and how they contributed to HIV/ HIVST services in the clinic and community.
2. **What has your experiences of delivering HIV/ HIVST services in this community been like?** Are there any particular challenges to providing HIV/ HIVST services in this community?
3. **Please tell me about any efforts to promote facility-based HIV/ HIVST screening.** What are some of the initiatives that were implemented to promote HIV/ HIVST treatment uptake? Which facility-based health workers were involved and how? Over what period were these efforts implemented? How did you prioritise who to screen for HIV/ HIVST? (Prompt: Specific

services access? Ages? Gender?) What do people say when they don't want to screen for HIV/ HIVST?

4. **Were there any efforts that focused on particular groups of people?** Did you notice any differences in the age groups, or other characteristics, of those coming to the clinic? Did you get the impression that clients were more/less willing to screen for HIV/ HIVST at certain times of the day, month or year?

Topic area 4 – **HIV/ HIVST and Stigma**

1. **Has the way that people talk about HIV/ HIVST in the community/ organization changed over the years?** What did they used to say about HIV/ HIVST? What do they say now? Are people living with HIV/ HIVST more or less stigmatised now than they were in the past? What do you think has contributed to the change?
2. **From what you know/ have seen, does the fear of being stigmatised stop people living with HIV/ HIVST from seeking treatment/ care?** Can this also delay diagnosis of HIV/ HIVST? If HIV/ HIVST was not stigmatized, would people get treatment sooner? Why? Do you know of people living with HIV/ HIVST who are afraid to ask their friends and family for help? Can you give an example of this?

Name of Stakeholder	What the stakeholder does	Influence on/ by HIVST CS	Locations/ contact details

Social harms and Incidents Grading

Questions from the CE 3ie

	GRADE 1 **(MILD)**	**GRADE 2** **(Moderate)**	**GRADE 3** **(Severe)**	**GRADE 4** **(Potentially life-threatening)** **(Within 30 days**
Definitions	Mild symptoms causing no or minimal interference with usual social & functional activities with intervention not indicated	Moderate symptoms causing greater than minimal interference with usual social & functional activities with intervention indicated	Severe symptoms causing inability to perform usual social & functional activities with intervention or hospitalization indicated	Potentially life-threatening symptoms causing inability to perform basic self-care functions with intervention indicated to prevent permanent impairment, persistent disability, or death

Description	Verbal, emotional or psychological Intimate-Partner Violence (IPV) Denying access to household resources Being ignored Being controlled (e.g. not allowed to leave house) Being shouted at	Coercion to self-test. Coercion to disclose a self-test result IPV that includes e.g. pushing, or slapping with an open hand that does not result in pain or visible marks >24hrs Threatened Severe physical violence Psychologically coercive sex. Being discriminated	IPV that leads to pain, bruising or marks >24hrs. Verbal threats of potentially lethal violence (e.g. statement of intent to kill, mock strangulation, threatened with a knife or gun Physically coercive sex Marriage break-up	IPV leading to hospitalization or death Suicide or attempted suicide Attack using potentially lethal force (e.g. knife, gun, hammer, kicks to head, asphyxiation) Tingling of the gum as a result of oral swabbing

Steps to follow	• Referred to community-based institutions for assistance. e.g. CBOs, Police.	• Referred to community-based institutions for assistance. • Reported to relevant authorities. E.g. Community Liaison Officer. • Refer to community-based GBV support organizations	• Report to marriage councillors • Report to relevant authorities. E.g. Community Liaison Officer. • Refer to community-based GBV support organizations	• Report to police/chief (Homicide) • Report to police (Suicide) • Report to relevant authorities e.g. Community Liaison Officer • Report to CLO (Tingling of the gum) • Refer to community-based GBV support organizations • Ensure safe alternative abode before discharge

Guideline for Documenting Community Led Model

Interim findings from the qualitative work that informs community-led models. Views on community-led distribution

1. Views on feasibility mixed but mostly positive. Foster control and ownership 'we know who is who' and where they are located. They also talked about potential challenges: incentives and resources, corrupt inclinations by leaders in the community. Some might sell the kits. Kept on referring to external support that was technical and financial.
2. Who should distribute – definitely not community leaders. Too old, too corrupt, have other people doing things for them; church leaders thought to have multiple roles and would have challenges in balancing work (apostolic sect values could be a barrier). Preference for non-leaders like village health workers, young people, committed men and women.
3. Suggested roles for distributors – distribute, record keeping, counselling and education on ST and linkage.
4. Desired characteristics: volunteer driven by intrinsic motivation, literate, good conduct, member of the local community. Want monetary incentives. Compensate time – minority view that it should not be incentivised.
5. Who should plan – multiple stakeholders, community leaders, HCWs technical support, PSI Zimbabwe was mentioned as source of training and incentives; MoH also; CLD committee to monitor process and social harms, general community – for participation and transparency. We should know selection process. Planning meetings where whole community is present
6. Social harms and violence to the distributor, partner violence, stigma and discrimination were also raised.
7. Sustainability was felt possible depending on kit supply (which must not be erratic) and community leader support. Reliable incentives and need for expert technical support from outside. Didn't feel test kits should be for sale.
8. Long standing community squabbles might be a threat.
9. KIIs MOHCC provincial, district and ward, AIDS committees etc.

Minimum definition of community-led approach. Common principles

1. A participatory process
2. Community takes leading role
    a. Community decides who distributes and how
    b. Community conducts distribution
    c. Communities collect and use data
    d. Community frames messaging and communication, disseminates learning
    e. Community decides on motivation and incentives
3. Community has access to
    a. Quality test kits that are in stock
    b. Technical assistance
    c. Training

d. Knowledge sharing
e. Resources in with sustainability plan and workshop

Template for documenting each community model

1. Date
2. Country
3. Community definition
4. Target population
5. Community structure for governance e.g. neighbourhood health committee
6. Distribution model and points
7. Typology of distributor
8. Training duration
9. Supervision
10. How distributors are motivated
11. Sustainability plan
12. Inputs what is going into the model – training, number of workshops etc, process of model development, funds, equipment and materials

Appendix 5: Facility Costing Survey Questionnaire

Costs to the Individual of Accessing HIV testing services (All models)

I would now like to ask you some questions about the costs you incurred for accessing this HIV test. Do you have any questions before we begin?

1. How did you get to the testing place/location from home?
   a. Walked ☐ b. by Taxi ☐ c. By bus ☐ d. by own car ☐ e. by Bicycle ☐
   1.1. How long did it take you to reach the testing place/facility? _____hours: _____minutes
   1.2. Did you pay for transport to get to the testing place/facility from home? a. Yes ☐ b. No ☐
   1.3. How much did you pay to get to the testing place including fuel if you used your own car? _____
2. For how long did it take to have your HIV test? Including waiting to be tested and given your results? _____hours: _____minutes
   2.1. What method did you use to have your HIV test? a. HIVST ☐ b. Finger prick by counsellor ☐
3. Did you have to pay any fees to take the HIV test? This includes consultation, registration, the test kit, and counselling. a. Yes ☐ b. No ☐
   3.1. How much in fees did you pay to take the HIV test?
4. Was this visit primarily to be tested for HIV? a. Yes ☐ b. No ☐
   4.1. If no, is the time given in Q 2 exclusively for HIV testing? a. Yes ☐ b. No ☐
   4.2. If no how long did it take, exclusively, to have your HIV test done? ____hours: _____minutes
5. Did you have to purchase food outside the home because of your HIV test? b. Yes ☐ b. No ☐
   5.1. How much did you pay for food? _____
6. Did you incur other costs related to your HIV test? a. Yes ☐ b. No ☐
   6.1. How much did you pay for other costs? _____
7. Did you have to pay for anyone to cover your regular duties while getting the HIV test? This includes to take care of your children, supervise your shop, or perform your regular economic activities. a. Yes ☐ b. No ☐
   7.1. How much did you pay for someone to cover your regular duties? _____
8. How much would you have earned during the time you took off to get tested for HIV? _____
9. Who primarily provided the money to support the costs of accessing the test? a. Household member ☐ b. relative/friend ☐ c. other (specify: _____) ☐
10. Were any of these costs covered by anyone else, such as, insurance or your employer? a. Yes ☐ b. No ☐

Health Care Utilization and Costs to the Individual of Accessing HIV Care (ART model)

I would now like to ask you some questions about your access to health care services in the last one year and how much it costs. Do you have any questions before we begin?

1. Are you currently on ART? a. Yes☐ b. No ☐
    a. If yes how long have you been on ART? _____
2. Are you currently taking Septrin? a. Yes☐ b. No ☐
3. If yes to Q1 what drugs are you taking? _____

(Check the card for quantities dispensed in the last 12 months)

4. How frequent do you come to get your drugs? a. Monthly☐ b. Bi-monthly ☐ c. Quarterly ☐ d. other (specify:_____) ☐
5. For this visit, how did you get to the facility from home?
    a. Walked ☐ b. By Taxi ☐ c. By bus ☐ d. By own car ☐ e. By Bicycle ☐
    5.1. How long did it take you to reach the facility? _____hours: _____minutes
6. Did you pay for transport to get to the facility from home? a. Yes ☐ b. No ☐
    6.1. How much did you pay to get to the testing place including fuel if you used your own car? _____
7. How long did you have to wait before you were attended to? _____ hours: _____minutes
8. For how long did it take to receive care services including any laboratory tests? _____hours: _____minutes
9. Did you have to pay any fees to access ART drugs a. Yes ☐ b. No ☐
    9.1. How much in fees did you pay to access the drugs? _____
10. Did you have to purchase food outside the home because of accessing HIV care services? a. Yes ☐ ☐
    b. No
    10.1. How much did you pay for food? _____
11. Did you incur other costs related to this visit to the facility? a. Yes☐ b. No ☐
    11.1. How much did you pay for other costs? _____
12. Did you have to pay for anyone to cover your regular duties while access HIV care services? This includes to take care of your children, supervise your shop, or perform your regular economic activities. a. Yes ☐ b. No ☐
    12.1. How much did you pay for someone to cover your regular duties? _____
13. How much would you have earned during the time you took off to access HIV care services? _____
14. Who primarily provided the money to support the costs of accessing HIV care services? a. Household member ☐ b. relative/friend ☐ c. other (specify: _____) ☐

A. WTP Questions: Potential Users

1. HIV Self-testing

QUESTION	RESPONSE CODE	
Have you heard of the HIV self-testing method?	Yes No Don't Know	1 2 99
Are you interested in using this method in your next HIV test?	Yes No Don't Know	1 2 99
READ TO CLIENT: I would now like to ask you some questions about the possible price of this product. In answering these questions, please bear in mind the following: 1. Assume that your income will stay the same even if the provider prices change. 2. Alternatives do exist for HIV testing services.		
If the price of this product was ZMW10.00, would you purchase this service from the provider?	Yes No Don't Know	1 2 99
If the price of this product was ZMW15.00, would you purchase this service from the provider?	Yes No Don't Know	1 2 99
If the price of this product was ZMW20.00, would you purchase this service from the provider?	Yes No Don't Know	1 2 99
If the price of this product was ZMW30.00, would you purchase this service from the provider?	Yes No Don't Know	1 2 99
If the price of this product was ZMW50.00, would you purchase this service from the provider?	Yes No Don't Know	1 2 99
What would be the highest amount you would be willing to pay for this product from the provider?	Amount _____	
If you were interested in using this product but were unable to pay the provider's price, what would you do?	Go without testing Go somewhere else for this service	1 2

	Other: specfy_____ I don't know	 88 99
You said you would not have an HIV test if you were unable to pay the provider's price. Would you use another HIV testing method?	Yes: specify _____ No I don't know	 1 2 99
Where would you go? **DO NOT READ CHOICES CODE ALL MENTIONED**	Public health facility NGO Private Sector Other: specfy_____	1 2 3 88
	I don't know	99

B. WTP for Amenities and Quality Improvements

a. WTP for Reduced Waiting Time

QUESTION	RESPONSE CODE	
How long did you have to wait before you were seen by clinic staff?	___hours ___minutes	
Do you consider this wait to be excessive, reasonable, or short?	Excessive Reasonable Short	1 2 3
Suppose we could cut your waiting time in half but your consultation would cost ZMW10.00, would you be willing to pay for this improvement?	Yes No Don't know	1 2 99

Suppose we could cut your waiting time in half but your consultation would cost ZMW15.00, would you be willing to pay for this improvement?	Yes No Don't know	1 2 99
Suppose we could cut your waiting time in half but your consultation would cost ZMW20.00, would you be willing to pay for this improvement?	Yes No Don't know	1 2 99
Suppose we could cut your waiting time in half but your consultation would cost ZMW30.00, would you be willing to pay for this improvement?	Yes No Don't know	1 2 99
Suppose we could cut your waiting time in half but your consultation would cost ZMW50.00, would you be willing to pay for this improvement?	Yes No Don't know	1 2 99
What is the most you would be willing to pay for your consultation if this Improvement was made?	Amount _____	

b. WTP for Counselling

QUESTION	RESPONSE CODE	
How much time did your provider spend with you explaining procedures and counselling you on your HIV related issues?	___hours ___minutes	
Do you consider the amount of time the provider spent with you to be excessive? Reasonable, or short?	Excessive Reasonable Short	1 2 3
Suppose we could increase counselling time you could spend with your provider by an additional10 minutes but your consultation would cost ZMW10.00, would you be willing to pay for this improvement?	Yes No Don't know	1 2 99
Suppose we could increase counselling time you could spend with your provider by an additional10 minutes but your consultation would cost ZMW15.00, would you be willing to pay for this improvement?	Yes No Don't know	1 2 99
Suppose we could increase counselling time you could spend with your provider by an additional10 minutes, but your consultation would cost ZMW20.00, would you be willing to pay for this improvement? Suppose we could increase counselling time you could spend with your provider by an additional10 minutes but your consultation would cost ZMW30.00, would you be willing to pay for this improvement?	Yes No Don't know Yes No Don't know	1 2 99 1 2 99
Suppose we could increase counselling time you could spend with your provider by an additional10 minutes but your consultation would cost ZMW50.00, would you be willing to pay for this improvement?	Yes No Don't know	1 2 99

What would be the highest amount you would be willing to pay for your Consultation if this improvement were made?	_____ Amount _____

WTP for Clinic Improvements

QUESTION	**RESPONSE CODE**				
READ AND SHOW CARD TO CLIENT: The clinic management is thinking of improving the waiting area at the clinic. This section lists 5 possible improvements for this clinic. Please rank each improvement from 1 to 5, where 1 means that the improvement is NOT AT ALL IMPORTANT to you and 5 means the improvement is VERY IMPORTANT to you.					
	Very Important				NOT Very Important
a. Waiting area with people for all services	5	4	3	2	1
b. Separate waiting area for HIV services only	5	4	3	2	1
c. More comfortable chairs in the waiting room	5	4	3	2	1
d. Air-conditioning in the waiting room	5	4	3	2	1
e. A TV in the waiting room	5	4	3	2	1
NOTE: IF RESPONDENT HAS TWO OR MORE SELECTIONS WITH THE SAME HIGHEST SCORE, ASK THE CLIENT WHICH AMENITY IS MOST IMPORTANT TO HER/HIM; IF THE CLIENT HAD TO CHOOSE, WHICH WOULD THE CLIENT CHOOSE. If “a” is most important GO TO …… If “b” is most important GO TO …… If “c” is most important GO TO ……. If “d” is most important GO TO ……. If “e” is most important GO TO …….					

You ranked **Waiting area with people for all services** as the most important Improvement. Would you be willing to pay your ZMW10.00 for next visit if the Clinic added this amenity?	Yes No Don't know	1 2 99
Would you be willing to pay ZMW15.00 for your next visit if the clinic added this amenity?	Yes No Don't know	1 2 99
Would you be willing to ZMW20.00 for your next visit if the clinic added this amenity?	Yes No Don't know	1 2 99
Would you be willing to pay ZMW30.00 for your next visit if the clinic added this amenity?	Yes No Don't know	1 2 99
Would you be willing to pay ZMW50.00 for your next visit if the clinic added this amenity?	Yes No Don't know	1 2 99
What would be the highest amount you would be willing to pay for your consultation if this improvement were made?	_____ Amount _____	
You ranked **Separate waiting area for HIV services only** as the most important Improvement. Would you be willing to pay ZMW10.00 for your next visit if the clinic added this amenity?	Yes No Don't know	1 2 99
Would you be willing to pay ZMW15.00 for your next visit if the clinic added this amenity?	Yes No Don't know	1 2 99
Would you be willing to ZMW20.00 for your next visit if the clinic added this amenity?	Yes No Don't know	1 2 99
Would you be willing to pay ZMW30.00 for your next visit if the	Yes	1

clinic added this amenity?	No Don't know	2 99
Would you be willing to pay ZMW50.00 for your next visit if the clinic added this amenity?	Yes No Don't know	1 2 99
What would be the highest amount you would be willing to pay for your consultation if this improvement were made?	_____ Amount _____	
You ranked **More comfortable chairs in the waiting room services** as the most important improvement. Would you be willing to pay ZMW10.00 for your next visit if the clinic added this amenity?	Yes No Don't know	1 2 99
Would you be willing to pay ZMW15.00 for your next visit if the clinic added this amenity?	Yes No Don't know	1 2 99
Would you be willing to ZMW20.00 for your next visit if the clinic added this amenity?	Yes No Don't know	1 2 99
Would you be willing to pay ZMW30.00 for your next visit if the clinic added this amenity?	Yes No Don't know	1 2 99
Would you be willing to pay ZMW50.00 for your next visit if the clinic added this amenity?	Yes No Don't know	1 2 99
What would be the highest amount you would be willing to pay for your consultation if this improvement were made?	_____ Amount _____	
You ranked **Air-conditioning in the waiting room** as the most important improvement.		

Would you be willing to pay ZMW10.00 for your next visit if the clinic added this amenity?	Yes No Don't know	1 2 99
Would you be willing to pay ZMW15.00 for your next visit if the clinic added this amenity?	Yes No Don't know	1 2 99
Would you be willing to ZMW20.00 for your next visit if the clinic added this amenity?	Yes No Don't know	1 2 99
Would you be willing to pay ZMW30.00 for your next visit if the clinic added this amenity?	Yes No Don't know	1 2 99
Would you be willing to pay ZMW50.00 for your next visit if the clinic added this amenity?	Yes No Don't know	1 2 99
What would be the highest amount you would be willing to pay for your consultation if this improvement were made?	_____ Amount _____	
You ranked **TV** as the most important as the most important improvement. Would you be willing to pay ZMW10.00for your next visit if the clinic added this amenity?	Yes No Don't know	1 2 99
Would you be willing to pay ZMW15.00 for your next visit if the clinic added this amenity?	Yes No Don't know	1 2 99
Would you be willing to ZMW20.00 for your next visit if the clinic added this amenity?	Yes No Don't know	1 2 99
Would you be willing to pay ZMW30.00 for your next visit if the clinic added this amenity?	Yes	1

	No 2 Don't know 99
Would you be willing to pay ZMW50.00 for your next visit if the clinic added this amenity?	Yes 1 No 2 Don't know 99
What would be the highest amount you would be willing to pay for your consultation if this improvement were made?	Amount _____
END INTERVIEW AND THANK RESPONDENT FOR HER TIME.	

Willingness to accept (WTA) Questions: Potential community distributors

b. HIVST Price

QUESTION	**RESPONSE CODE**
READ TO CLIENT: I would now like to ask you some questions about the possible price of this product. In answering these questions, please bear in mind the following: 1. Assume that you will continue receiving HIVST kits free of charge. 2. Alternatives do exist for HIV testing services.	
How much would you charge to distribute a kit to potential users?	Amount _____

a. WTA for incentives

QUESTION	**RESPONSE CODE**
Suppose supplies decide to give you any form of non-monetary incentives, would You still charge for distributing HIVST kits	Yes 1 No 2

	Don't know	99
How much would you charge for distributing one kit?	Amount _____	

WTP for change in HIVST demonstration time

QUESTION	**RESPONSE CODE**	
How long did you take to demonstrate how to do HIV Self-Testing?	___hours ___minutes	
Do you consider this wait to be excessive, reasonable, or short?	Excessive	1
	Reasonable	2
	Short	3
Suppose we could cut your waiting time in half but all other things remain the same, how much would you charge for distributing one kit?	Amount _____	

c. WTP for Reduced Waiting Time

QUESTION	**RESPONSE CODE**	
Suppose the government decide to pay you for distributing kits to the community members, will you be distributing kits for free?	Excessive	1
	Reasonable	2
	Short	3
Suppose the government offers you to pay you ZMW1.00 per kit distributed, would you continue distributing kits for free?	Yes	1
	No	2
	Don't know	99
Suppose the government offers you to pay you ZMW2.00 per kit distributed, would you continue distributing kits for free?	**Yes**	
	No	

	Don't know
Suppose the government offers you to pay you ZMW3.00 per kit distributed, would you continue distributing kits for free?	Yes No Don't know
Suppose the government offers you to pay you ZMW4.00 per kit distributed, would you continue distributing kits for free?	Yes No Don't know
Suppose the government offers you to pay you ZMW5.00 per kit distributed, would you continue distributing kits for free?	Yes No Don't know
What is the maximum amount you would be willing to accept to be paid?	Amount _____

Appendix 6. Society for Family Health Tools

ART SECONDARY DISTRIBUTION HIV SELF-TESTING REGISTER

District: …… Health Facility/Institution (Name) …….

	Client details							Partner's information				Remarks/Reasons for not accepting the test kit
SN	**Accepted HIVST Kits**		**Client's Name**	**Age**	**Sex**	**Today's date** DD/MM/YYYY	**Duration since enrolment *(months)***	**Age**	**Sex**	**Education level**	**Occupation**	**1. I have no partner at the moment** **2. Partner on ART** **3. Partner already tested** **4. Scared of partner** **5. Partner may not be interested** **6. Other, specify**
	Yes	**No**					1. 0 - 6 2. 7 - 12 3. 13 - 24 4. 25 and above			1. None 2. Primary 3. Secondary 4. Tertiary 5. Don't know	1. Self-employed 2. Employed 3. unemployed	

Total Kits Distributed	**|___|___|**

MCH SECONDARY DISTRIBUTION HIV SELF-TESTING REGISTER

District: …… Health Facility/Institution (Name) …….

	Client details							**Partner's information**				**Remarks/Reasons for not accepting the test kit**
SN	**Accepted HIVST Kits**		**Client's Name**	**Age**	**Sex**	**Today's date** DD/MM/YYYY	**Trimester**	**Age**	**Sex**	**Education level**	**Occupation**	**7. I have no partner at the moment** **8. Partner on ART** **9. Partner already tested** **10. Scared of partner** **11. Partner may not be interested** **12. Other, specify**
	Yes	**No**					5. First 6. Second 7. Third			1. None 2. Primary 3. Secondary 4. Tertiary 5. Don't know	1. Self-employed 2. Employed 3. unemployed	

Total Kits Distributed	**|___|___**

HIV SELF-TESTING REGISTER

District: …… Health Facility/Organization (Name) …….

Distribution Channel (*Tick one*): **Facility Led** ☐ **Community Led** ☐

	Background Information						**Testing history**				**Remarks/Reasons for not accepting the test kit**
SN	**Accepted HIVST Kits**		**Client's Name**	**Age**	**Sex**	**Today's Date** (dd/mm/yyyy)	**Ever tested**		**If ever tested, type of last test**		**1. Already on ART** **2. Already tested** **3. Not interested** **4. Other, specify _____**
	Yes	**No**					**Yes**	**No**	Self-Test	Provider based test	
Total Kits Distributed											**|___|___|**

Workplace HIV Self-Testing Questionnaire

District: _____ Date:

Workplace Name: _____ Age: Sex:

1. What is your level of employment?

Senior Management Other

2. Do you agree to obtain a self-test kit for your own testing? Yes: No:

3. If no, what is your reason for declining?

Already on ART Already tested

Not interested Other (specify): _____

4. Have you ever tested for HIV before? Yes: No:

5. If yes, which type of test did you use?

Self-testing Tested by health staff

Linkage –Self-referral Card

Was confirmatory HIV testing done?

Yes ☐

No ☐

Result of Confirmatory HIV testing (Tick one):

Non- Reactive ☐

Reactive ☐

Indeterminate ☐

Unknown ☐

Enrolled into ART? Yes ☐ No ☐

Date enrolled on ART: ____/____/20_____

If enrolled in ART, provide the ART Number:

……

Appendix 7. Tools for reporting adverse events and social harms

Name of person Reporting:		**Date:**
		Time:
Site		
Name of Health Centre		
Date of Event		
Description of the Event		
Date report written		
Signed (Person Reporting)		
Action Taken (if any)		
Date of Action		
Signature site line manager		
COMMENTS FROM STUDY MANAGER (HQ)		
Date:	**Signed (Study Manager):**	
COMMENTS FROM STUDY PI		
Date:	***Signed (PI):***	
REGULATORY AFFAIRS OFFICE **Event Classification** **SI [ ] Social Harm [ ] Protocol Deviation [ ] Critical Event [ ]**		
REPORTING ACTION **local IRB [ ] local Regulatory Authority [ ] other [ ]** ***if other, state_____***		
Date:	***Signed (RAO):***	

SOCIAL HARMS REPORT FORM

Instructions: This form is to be completed for any event that is classed as Social Harms. Site study product distributor should complete Section 1 of the form. Site Manager should make complete Section 2 of the form. Study Manager should complete Section 3 and PI should complete Section 3 of the form.

SECTION 1

Name of person reporting event	
Site	
Name of Health centre	

Describe the social harm event

Date of event

DD MM YY

What impact did this situation have on the participant's quality of life?

☐ ☐

Y N

If yes please state

Other participants comments or remarks

☐

None

Signed	***Dated***
SECTION 2	
Further action taken to help resolve this situation?	
Date of Action	***DD MM YY***
SECTION 3	
Action taken to prevent future occurrences of this incident	
Signed	***Dated***
SECTION 4	
COMMENTS BY PI	
Signed	***Dated***

Appendix 8. Investigators' Curriculum Vitae

CV: Helen M Ayles

Employment History

Current Post:	Professor in Infectious Diseases and International Health		
Institution:	London School of Hygiene & Tropical Medicine		
Funding:	HEFCE	**Start date:**	01/08/2016
Description of post:	I am based full time in Lusaka, Zambia where I am the Director of Research at Zambart. Zambart is an independent research organisation that was formed out of a collaboration between London School of Hygiene and Tropical medicine and The University of Zambia, School of medicine. I specialise in conducting large-scale trials of complex public health interventions and am currently one of the PIs of the HPTN 071(PopART) trial, which is a large HIV prevention study in 21 sites in Zambia and South Africa. This study employs over 600 staff in Zambia. I am also currently the PI for a large TB consortium (TREATS) funded by EDCTP I also conduct diagnostics, treatment and prevention studies in the fields of TB and HIV. Currently I am the Pi or Zambia country PI for 2 studies on HIV self testing funded by UNITAID and 3ie and am PI for the zambart site for a trial of a novel TB vaccine I hold an honorary NHS consultant post in Infectious Diseases at the Brighton and Sussex university Hospitals NHS Trust		

Previous Posts

Dates	**Institution**	**Job Title**
2015-2016	LSHTM	Reader in Infectious Disease and International Health
2007-2015	LSHTM	Senior Clinical Lecturer
2003-2007	LSHTM	Research Fellow/lecturer
2001-2003	Hammersmith Hospital	Registrar infectious Diseases/microbiology
1997-2001	LSHTM	Wellcome Trust Training Fellow in Clinical Tropical medicine (and MSc in epidemiology)

1994-1997	King George Hospital, Ilford, Hospital for Tropical diseases, Middlesex Hospital	Registrar Infectious/Tropical diseases and HIV medicine
1992-1994	Kisiizi Hospital, Uganda	Medical Officer
1989-1992	Multiple Hospitals	House officer, senior house officer and registrar in medicine

Educational Qualifications

Dates	University	Subject	Qualification
2004	University of London	Clinical Epidemiology	PhD
1998	LSHTM, University of London	Epidemiology of Infectious Diseases	MSc
1989	Royal Free Hospital, University of London	Medicine and Surgery	MB.BS
1986	Royal Free Hospital, University of London	Immunopathology of Infectious diseases	BSc

Clinically qualified: Yes ☒ No ☐ **Clinically active:** Yes ☒ No ☐

Research Support (current)

1. EDCTP Tuberculosis Reduction through Expanded Antiretroviral Treatment and Screening for active TB (TREATS) EUR 12,902,402 PI
2. NIH/Gates Foundation/OGAC. PopART/HPTN Trial. $73m. 2011-2018. Co-PI
3. NIH. PopART Phylogenetics. $3,123,596. 2013-2017. LSHTM Co-PI.
4. Gates Foundation. Phylogenetics Networks to address Transmission of HIV (PANGEA). $192,882. 2013-2016. LSHTM Co-PI.
5. Gates Foundation. Zambian/South African tuberculosis and AIDS reduction trial. Approx US$14m. 2007-2012. PI.
6. Aeras/GSK. A phase IIb, double-blind, randomized, placebo-controlled study to evaluate the efficacy, safety and immunogenicity of GSK Biologicals' candidate tuberculosis (TB) vaccine GSK 692342 against TB disease, in healthy adults aged 18 – 50 years, living in a TB endemic region. 2013-2019 $500,000 PI
7. UNITAID. HIV Self-Testing in Africa. 2014-2019.approx $1,200,000 (Zambia) PI
8. MRC (Supervisor for Dr Lily Telisinghe fellowship) Can community wide active case finding for tuberculosis and universal testing and treatment for HIV control the African TB Epidemic? 2016-2019 £221,372. PI/supervisor
9. EHPSA/DFID. Adolescents in PopART. 2015-2017 Approx. £1million. Co-PI

Committee and Advisory Board memberships (last 5 years)

Member: Global Fund Technical Review Panel

Member: Stop TB Partnership/WHO TB/HIV core group

Member: Zambia national TB/HIV committee

Member: WHO guidelines committee for ART and HIV care 2015

Member: WHO Guidelines committee for TB screening 2012

Publications (last 5 years)

1. Bock P, Jennings K, Vermaak R, Cox H, Meintjes G, Fatti G, Kruger J, De Azevedo V, Maschilla L, Louis F, Gunst C, Grobbelaar N, Dunbar R, Limbada M, Floyd S, Grimwood A, **Ayles H**, Hayes R, Fidler S, Beyers N. Incidence of Tuberculosis Among HIV-Positive Individuals Initiating Antiretroviral Treatment at Higher CD4 Counts in the HPTN 071 (PopART) Trial in South Africa. J Acquir Immune Defic Syndr. 2018 Jan 1;77(1):93-101.
2. Chi BH, Mutale W, Winston J, Phiri W, Price JT, Mwiche A, **Ayles H**, Stringer JSA. Infant HIV-Free Survival in the Era of Universal Antiretroviral Therapy for Pregnant and Breastfeeding Women: A Community-Based Cohort Study from Rural Zambia. Pediatr Infect Dis J. 2018 Mar 27.
3. Hargreaves JR, Krishnaratne S, Mathema H, Lilleston PS, Sievwright K, Mandla N, Mainga T, Vermaak R, Piwowar-Manning E, Schaap A, Donnell D, **Ayles H**, Hayes RJ, Hoddinott G, Bond V, Stangl A, Team HS. Individual and community-level risk factors for HIV stigma in 21 Zambian and South African communities: analysis of data from the HPTN071 (PopART) study. AIDS. 2018 Mar 27;32(6):783-93.
4. Perriat D, Balzer L, Hayes R, Lockman S, Walsh F, **Ayles H**, Floyd S, Havlir D, Kamya M, Lebelonyane R, Mills LA, Okello V, Petersen M, Pillay D, Sabapathy K, Wirth K, Orne-Gliemann J, Dabis F, Universal T, Treat Trials C. Comparative assessment of five trials of universal HIV testing and treatment in sub-Saharan Africa. J Int AIDS Soc. 2018 Jan;21(1).
5. Sabapathy K, Mulubwa C, Mathema H, Mubekapi-Musadaidzwa C, Schaap A, Hoddinott G, Hargreaves J, Floyd S, **Ayles H**, Hayes R, Team HS. Is home-based HIV testing universally acceptable? Findings from a case-control study nested within the HPTN 071 (PopART) trial. Tropical medicine & international health : TM & IH. 2018 Apr 2.
6. Yates TA, **Ayles H,** Leacy FP, Schaap A, Boccia D, Beyers N, Godfrey-Faussett P, Floyd S. Socio-economic gradients in prevalent tuberculosis in Zambia and the Western Cape of South Africa. Tropical medicine & international health : TM & IH. 2018 Feb 12.
7. Bailey SL, **Ayles H**. Association between diabetes mellitus and active tuberculosis in Africa and the effect of HIV. Tropical medicine & international health : TM & IH. 2017 Mar;22(3):261-8.
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9. Bond V, Floyd S, Fenty J, Schaap A, Godfrey-Faussett P, Claassens M, Shanaube K, **Ayles H**, Hargreaves JR. Secondary analysis of tuberculosis stigma data from a cluster randomised trial in Zambia and South Africa (ZAMSTAR). Int J Tuberc Lung Dis. 2017 Nov 1;21(11):49-59.
10. Claassens MM, van Schalkwyk C, Floyd S, **Ayles H**, Beyers N. Symptom screening rules to identify active pulmonary tuberculosis: Findings from the Zambian South African Tuberculosis and HIV/AIDS Reduction (ZAMSTAR) trial prevalence surveys. PLoS One. 2017;12(3):e0172881.
11. Hayes R, Floyd S, Schaap A, Shanaube K, Bock P, Sabapathy K, Griffith S, Donnell D, Piwowar-Manning E, El-Sadr W, Beyers N, **Ayles H**, Fidler S, Team HS. A universal testing and treatment intervention to improve HIV control: One-year results from intervention communities in Zambia in the HPTN 071 (PopART) cluster-randomised trial. PLoS Med. 2017 May;14(5):e1002292.
12. Mutale W, **Ayles H**, Bond V, Chintu N, Chilengi R, Mwanamwenge MT, Taylor A, Spicer N, Balabanova D. Application of systems thinking: 12-month postintervention evaluation of a complex health system intervention in Zambia: the case of the BHOMA. Journal of evaluation in clinical practice. 2017 Apr;23(2):439-52.

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14. Mwenge L, Sande L, Mangenah C, Ahmed N, Kanema S, d'Elbee M, Sibanda E, Kalua T, Ncube G, Johnson CC, Hatzold K, Cowan FM, Corbett EL, **Ayles H,** Maheswaran H, Terris-Prestholt F. Costs of facility-based HIV testing in Malawi, Zambia and Zimbabwe. PLoS One. 2017;12(10):e0185740.
15. Sabapathy K, Mubekapi-Musadaidzwa C, Mulubwa C, Schaap A, Hoddinott G, Stangl A, Floyd S, **Ayles H**, Fidler S, Hayes R, team Hs. Predictors of timely linkage-to-ART within universal test and treat in the HPTN 071 (PopART) trial in Zambia and South Africa: findings from a nested case-control study. J Int AIDS Soc. 2017 Dec;20(4).
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49. Chishinga N, Godfrey-Faussett P, Fielding K, **Ayles H.** Effect of home-based interventions on virologic outcomes in adults receiving antiretroviral therapy in Africa: a meta-analysis. BMC public health. 2014 Mar 7;14:239.
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51. Hayes R, **Ayles H**, Beyers N, Sabapathy K, Floyd S, Shanaube K, Bock P, Griffith S, Moore A, Watson-Jones D, Fraser C, Vermund SH, Fidler S, Team HS. HPTN 071 (PopART): rationale and design of a cluster-randomised trial of the population impact of an HIV combination prevention intervention including universal testing and treatment - a study protocol for a cluster randomised trial. Trials. 2014 Feb 13;15:57.
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53. Maduskar P, Hogeweg L, de Jong PA, Peters-Bax L, Dawson R, **Ayles H,** Sanchez CI, van Ginneken B. Cavity contour segmentation in chest radiographs using supervised learning and dynamic programming. Medical physics. 2014 Jul;41(7):071912.
54. Mutale W, Balabanova D, Chintu N, Mwanamwenge MT, **Ayles H**. Application of system thinking concepts in health system strengthening in low-income settings: a proposed conceptual framework for the evaluation of a complex health system intervention: the case of the BHOMA intervention in Zambia. Journal of evaluation in clinical practice. 2014 May 9.
55. Mutale W, Stringer J, Chintu N, Chilengi R, Mwanamwenge MT, Kasese N, Balabanova D, Spicer N, Lewis J, **Ayles H**. Application of balanced scorecard in the evaluation of a complex health

system intervention: 12 months post intervention findings from the BHOMA intervention: a cluster randomised trial in Zambia. PLoS One. 2014;9(4):e93977.
56. Muyoyeta M, Maduskar P, Moyo M, Kasese N, Milimo D, Spooner R, Kapata N, Hogeweg L, van Ginneken B, **Ayles H.** The sensitivity and specificity of using a computer aided diagnosis program for automatically scoring chest X-rays of presumptive TB patients compared with Xpert MTB/RIF in Lusaka Zambia. PLoS One. 2014;9(4):e93757.
57. Sattar S, Van Schalkwyk C, Claassens M, Dunbar R, Floyd S, Enarson DA, Godfrey-Faussett P, **Ayles H,** Beyers N. Symptom reporting among prevalent tuberculosis cases who smoke, are HIV-positive or have hyperglycaemia. Public health action. 2014 Dec 21;4(4):222-5.
58. **Ayles H**, Muyoyeta M, Du Toit E, Schaap A, Floyd S, Simwinga M, Shanaube K, Chishinga N, Bond V, Dunbar R, De Haas P, James A, Gey van Pittius NC, Claassens M, Fielding K, Fenty J, Sismanidis C, Hayes RJ, Beyers N, Godfrey-Faussett P, team Z. Effect of household and community interventions on the burden of tuberculosis in southern Africa: the ZAMSTAR community-randomised trial. Lancet. 2013 Oct 5;382(9899):1183-94.
59. Boccia D, Hargreaves J, Howe LD, De Stavola BL, Fielding K, **Ayles H,** Godfrey-Faussett P. The measurement of household socio-economic position in tuberculosis prevalence surveys: a sensitivity analysis. Int J Tuberc Lung Dis. 2013 Jan;17(1):39-45.
60. Claassens M, van Schalkwyk C, den Haan L, Floyd S, Dunbar R, van Helden P, Godfrey-Faussett P, **Ayles H**, Borgdorff M, Enarson D, Beyers N. High prevalence of tuberculosis and insufficient case detection in two communities in the Western Cape, South Africa. PLoS One. 2013;8(4):e58689.
61. Henostroza G, Topp SM, Hatwiinda S, Maggard KR, Phiri W, Harris JB, Kruuner A, Kapata N, **Ayles H,** Chileshe C, Reid SE. The high burden of tuberculosis (TB) and human immunodeficiency virus (HIV) in a large Zambian prison: a public health alert. PLoS One. 2013;8(8):e67338.
62. Maduskar P, Muyoyeta M, **Ayles H,** Hogeweg L, Peters-Bax L, van Ginneken B. Detection of tuberculosis using digital chest radiography: automated reading vs. interpretation by clinical officers. Int J Tuberc Lung Dis. 2013 Dec;17(12):1613-20.
63. Murray EJ, Bond VA, Marais BJ, Godfrey-Faussett P**, Ayles HM**, Beyers N. High levels of vulnerability and anticipated stigma reduce the impetus for tuberculosis diagnosis in Cape Town, South Africa. Health Policy Plan. 2013 Jul;28(4):410-8.
64. Mutale W, **Ayles H**, Bond V, Mwanamwenge MT, Balabanova D. Measuring health workers' motivation in rural health facilities: baseline results from three study districts in Zambia. Human resources for health. 2013 Feb 21;11:8.
65. Mutale W, Bond V, Mwanamwenge MT, Mlewa S, Balabanova D, Spicer N, **Ayles H**. Systems thinking in practice: the current status of the six WHO building blocks for health system strengthening in three BHOMA intervention districts of Zambia: a baseline qualitative study. BMC health services research. 2013 Aug 1;13:291.
66. Mutale W, Godfrey-Fausset P, Mwanamwenge MT, Kasese N, Chintu N, Balabanova D, Spicer N, **Ayles H.** Measuring health system strengthening: application of the balanced scorecard approach to rank the baseline performance of three rural districts in Zambia. PLoS One. 2013;8(3):e58650.
67. Mutale W, Mwanamwenge MT, Balabanova D, Spicer N, **Ayles H**. Measuring governance at health facility level: developing and validation of simple governance tool in Zambia. BMC international health and human rights. 2013 Aug 9;13:34.
68. Muyoyeta M, Mwanza WC, Kasese N, Cheeba-Lengwe M, Moyo M, Kaluba-Milimo D, **Ayles H.** Sensitivity, specificity, and reproducibility of the Capilia TB-Neo assay. J Clin Microbiol. 2013 Dec;51(12):4237-9.
69. O'Connell R, Chishinga N, Kinyanda E, Patel V, **Ayles H**, Weiss HA, Seedat S. Prevalence and correlates of alcohol dependence disorder among TB and HIV infected patients in Zambia. PLoS One. 2013;8(9):e74406.

70. Stringer JS, Chisembele-Taylor A, Chibwesha CJ, Chi HF, **Ayles H**, Manda H, Mazimba W, Schuttner L, Sindano N, Williams FB, Chintu N, Chilengi R. Protocol-driven primary care and community linkages to improve population health in rural Zambia: the Better Health Outcomes through Mentoring and Assessment (BHOMA) project. BMC health services research. 2013;13 Suppl 2:S7.
71. van den Heuvel L, Chishinga N, Kinyanda E, Weiss H, Patel V, **Ayles H,** Harvey J, Cloete KJ, Seedat S. Frequency and correlates of anxiety and mood disorders among TB- and HIV-infected Zambians. AIDS care. 2013;25(12):1527-35.
72. Vermund SH, Fidler SJ, **Ayles H,** Beyers N, Hayes RJ. Can combination prevention strategies reduce HIV transmission in generalized epidemic settings in Africa? The HPTN 071 (PopART) study plan in South Africa and Zambia. J Acquir Immune Defic Syndr. 2013 Jul;63 Suppl 2:S221-7.

ALWYN GLADWYN ZEBRON MWINGA

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Lusaka Zambia
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EDUCATION

PGDip Bioethics	University of Stellenbosch	09/13
M.Med (Internal Medicine)	University of Zambia	1996
Diploma in Dermatology	University of London	1990
MSc (Clin Trop Med)	University of London	1989
DTM&H	Royal College of Physicians	1989
MB ChB	University of Zambia	1982
BSc (Human Biology)	University of Zambia	1978
BSc	University of Zambia	1977

Other Educational Details
Inter-regional training course and study tour on Nuclear Medicine.
September 1985, Moscow USSR.

Intensive course in Epidemiology, June 1990, LSHTM

Ethical Issues in International Health Research
Harvard School of Public Health, Boston June 1999

Health Leadership and Management Course. Global Health Action, Atlanta October-November 2002

Leadership and Management Institute, CDC Corporate University Year 9 (2007-2008)

Grants Certification Program CDC 2009

Workshops attended
International Workshop on research methods in lung health. IUATLD Nairobi December 1995

IDRC/IUATLD Workshop on Priorities for Research in Lung Health

Paris December 1997

IDRC/IUATLD Workshop on Protocol Development for
Health Services Research on Tuberculosis Paris September 1998

Workshop on setting research priorities in Health and Health care for sub-Saharan Africa: an open consultation (IDRC), Nairobi, Kenya, February 1999

Workshop on Ethics of clinical research in developing countries
Nuffield Council of Bioethics London February 1999

Workshop on Curriculum Development for Clinical Trials Monitors.
AnnecyFranceOrganized by European Commission March 1999

Orientation Workshop on the teaching of Tuberculosis control in Medical schools in English speaking countries in Africa, WHO, Lusaka July 1999

Bioethics of research in developing countries
ArushaTanzania November1-5 1999

Global Forum on Bioethics of Research
Bethesda, Maryland USA, November 7-19 1999

Consultation on TB Drug Development South African Medical Research Council
Cape Town, February 2000

Achievements and Awards

The Billingsley Award for the best student in 2nd year pre-clinical sciences	1979
The Muuka Ndulo prize for the best graduating student in BSC (Human Biology)	1979
Prize for Essay on Leprosy in Zambia by LEPRA, UK	1980
Beit Trust Fellowship 1988 – 1990	1988
Global Health Achievement Award, Office of Global Health CDC	2007
Distinguished Services Award Zambia Medical Association	2008
PEPFAR Lifetime Achievement Award	2011
Science and Technology Award National Science and technology Council, Zambia	2012

Professional Experience

Deputy Director (Programs), CDC GAP Zambia	March 2009 - Present

Provides leadership to the Centers for Disease Control program in Zambia in all technical and administrative issues. Provides direct supervision to the Provincial Field Offices. Works closely with the Ministry of Health for the implementation of CDC funded activities in HIV/AIDS and Influenza surveillance.

Associate Director of Science, CDC GAP Zambia September 2004– March 2009
Chief, Care, Treatment and Prevention Branch August 2006 – March 2009

Participates in development of yearly country operational plans for PEPFAR funding, advocated for and developed funding opportunity announcements for direct CDC support to Provincial Health Offices, provides guidance and direction for CDC supported programs in care, treatment and support, represents the USG on the National Avian Influenza Task Force, provides direct TA support to the National TB program, supervises 3 CDC Field offices.

Medical Epidemiologist, CDC GAP Zambia July 2001 – August 2004
She was responsible for the collective design, implementation, and monitoring and evaluation of programs in the field of HIV/AIDS, STI and TB prevention and control activities. Organized the first-ever National TB Conference funded by CDC that served to raise awareness of the TB program and increase support for a decentralized TB program. Participated in the development of the first country application to the Global Fund for TB, Developed a training manual for community TB treatment supporters.

Senior Lecturer 1999 - 2001
Department of Medicine
School of Medicine
Involved in the care and treatment of patients admitted in the medical wards of the University Teaching Hospital. Supervised a team of doctors in the provision of in-patient care. Involved in the teaching and examinations of undergraduate medical students and postgraduate doctors. Acted as Head of the Department of Medicine at various times during the absence of the incumbent

Project Coordinator 1996 – July 2001
UNZA-UCLMS Project

Coordinated a large trial of adjunctive immunotherapy with *Mycobacterium vaccae* in HIV positive patients presenting with tuberculosis.
Established a trial of cotimixazole preventive treatment in HIV positive patients with tuberculosis.

Research Affiliate 1990 - 1996
LSHTM and University of Zambia School of Medicine
Registrar and Resident in Internal Medicine

Coordinated a large trial of isonizaid preventive therapy in people living with HIV/AIDS.
Successfully completed the 4 year residency program in internal medicine

General Medical Officer 1986 - 1988
Private Practice

Duties and Accomplishments out-patient care in a busy general practice

Registrar, Department of Medicine 1985 -1986
University Teaching Hospital

Provided in-patient and out-patient care to patients in the medical department
Participated in clinical teaching of medical students and lectures to nursing students

Senior Registered Medical Officer 1983 - 1985
University teaching Hospital

Provided first line diagnosis and treatment to patients admitted in the medical department

Junior Registered Medical Officer 1982 - 1983
University Teaching Hospital

Rotated through the departments of medicine, surgery, obstetrics/gynaecology and pediatrics providing first line care and treatment. Obtained full registration with the Medical Council of Zambia

Short Term Consultancies
World Health Organization February 1998
Purpose: Development of guidelines on the appropriate use of Preventive Therapy for TB in people living with HIV

World Health Organization AFRO December 1999
Purpose: Evaluation of magnitude of access to care for HIV/AIDS patients in Botswana

World Health Organization/UNAIDS June 2000
Purpose: Development of guidelines on the prophylactic use of cotrimoxazole to prevent opportunistic infections in persons living with HIV/AIDS in Africa

World Health Organization
Expert consultation on TB/HIV Research Priorities 2010/2011

Membership on International Consultations
Committee Member: American Thoracic Society 1998
CDC Committee on Preventive Therapy for TB

CIOMS Consultation for the revision of the 1993 2000 - 2002
CIOMS International Ethical Guidelines for Biomedical
Research Involving Human Subjects

TB Infection Control Global consultation October 2007
World Health Organization

Other Professional Experience

Medical Women Association of Zambia
Secretary General 1992 -1994
Chairperson 1994 -1996
Treasurer 1996 -1998
Accomplishment: Involved in the development of the Association and providing guidance and direction.

Child Survival and Development Task Force 1994
Health Task Force
Ministry of Health of Republic of Zambia
Accomplishment: Participated in the development of the direction and focus of the health sector at the time of Health reform

Director 1998 - 2000
Adventist Health Ministries
Seventh Day Adventist Church
Accomplishments; Provided guidance to the Church run health institutions in development and execution of health services on a part-time, voluntary basis

Board member 1999-2002
National Science and Technology Council
Ministry of Science, Technology and Vocational Training
Accomplishments: Represented the medical research committee on the Council.

Board Member 1999 - 2002
National Institute for Scientific and Industrial Research

Deputy Chairperson 1999
Scientific Committee
International Conference on AIDS and STDs in Africa (ICASA) Lusaka

Member 1998 - 1999
Observational sub-committee
National Task force on Natural Remedies for HIV/AIDS
Government of Zambia
Accomplishment: Developed a protocol for an observation study to validate the claims of traditional remedies

Member 2000 - 2011
University of Zambia Research Ethics Committee
Accomplishments: provides peer review for proposals submitted to the research ethics committee

Member 2001 – 2003
AIDS Commission
Zambia Union of Seventh Day Adventists
Accomplishment: Provided guidance to the Church in developing of strategic approach to dealing with HIV/AIDS

Chairperson 1999 -2003.
National Tuberculosis and Leprosy Working Group
National AIDS Council
Accomplishments: Successfully advocated for increased attention to TB following the decentralization resulting in a breakdown in TB control, including the establishment of the post of TB focal person at district and province levels

Member
WHO Global TB/HIV Working Group

Member 2002-2005
Partnership Board
European and Developing Countries Clinical Trials Program

Experience with Scientific Reviews and Journals
Peer Reviewer for Tuberculosis Proposals 1998, 2002
INCO-Dev-Programme and Key Action Infectious Diseases
European Commission

Associate Editor, 2001 - 2011
International Journal of Tuberculosis and Lung Disease

Associate Editor,
The Lancet Infectious Diseases

Member
International Advisory Board,
The Lancet

External Reviewer for European Union funded project December 2004
Development of a tuberculosis vaccine in Africa.
The Gambia

Function as a Peer reviewer for proposals submitted to the following research organizations:

Medical Research Council (UK)
Welcome Trust
International Development Research Center
FIDELIS (Fund for Innovative DOTS Expansion through Local Initiatives to Stop TB) - IUATLD

Member 2003 – present
RCS+ Initiative Team on Tuberculosis (4FDCs),
TDR, WHO.

Member 2002 -2010
Clinical Trials Steering Committee

International Union against TB and Lung Disease.

Member,
Advisory Panel for Dossier on Ethics of Research
SciDev.Net

Member, 2002 - 2010
Microbicides Development Programme (MDP)
International Scientific Advisory Group (ISAG)
Trial Steering Committee (TSC)

Member 2003-2005
Project Review Committee
FIDELIS

Member, 2006 - date.
International Data Safety Monitoring Board for Africa,
National Institute of Allergy and Infectious Disease (NIAID)

Abstract Reviewer
International AIDS Conference 2204, 2006, 2008

Data Safety Monitoring Board Member
OFLOTUB, Rifaquin, ReMox,

Membership on Other Committees
Board member 2003 - 2005
The Mentor Forum
The Organization was a not-for profit organization that had a goal of encouraging excellence in all endeavors of life targeting young people.

Treasurer 2000 to 2006
Pan-African Bioethics Initiative (PABIN)

Extracurricular Activities
Provides lectures and talks to lay people/students on life style and other health issues including HIV/AIDS, cancer and nutrition

PUBLICATIONS
1. Elliott A, **Mwinga A**. Coping with dual infection - *HIV and Tuberculosis AIDS Action 1992*
2. Elliott AM, Halwindii B, Hays RJ, Luo N, **Mwinga AG,** Tembo G, Machiels L, Steenbergen G, Pobee JOM, Nunn P, McAdam KPWJ. The Impact of human immunodeficiency virus on mortality of patients treated for tuberculosis in a cohort study in Zambia. *Transactions of the Royal Society of Tropical Medicine and Hygiene 1995; 89 78-82*
3. Elliott AM, Halwindii B, Hays RJ, Luo N, **Mwinga AG**, Tembo G, Machiels L, Steenbergen G, Pobee JOM, Nunn P, McAdam KPWJ. The impact of human immunodeficiency virus on response to treatment and recurrence rate in patients treated for tuberculosis: two-year follow-up of a cohort in Lusaka, Zambia. *Journal of Tropical Medicine and Hygiene 1995;98 9-21*

4. Godfrey-Faussett P, Baggaley R, **Mwinga AG**, Hosp M, Porter J, Luo N, Kelly M, Msiska R, McAdam K. Recruitment to a trial of preventive therapy from a voluntary HIV testing centre in Lusaka: relevance to implementation *Transactions of the Royal Society of Tropical Medicine and Hygiene 1995; 89, 354-358*
5. **Mwinga A**. The Impact of tuberculosis and HIV on patients and society. NU *News on Health Care in Developing Countries 1/95 vol 9; 18-21*
6. Elliott A, Halwindi B, **Mwinga A**. Treatment of HIV infected patients in Zaire. *New England Journal of Medicine 1995; 333:519-520*
7. Elliott A, **Mwinga A**, Foster SD. Treatment of tuberculosis in Developing Countries. *The Lancet 1995; 346:1098-1099*
8. Godfrey-Faussett P, **Mwinga A**, Raviglione M, Hosp M, Baggaley R, Porter J, McAdam K. Tuberculosis and HIV infection.*The Lancet, 1993; 342:1368-1369*
9. Hosp M, Elliott AM, Raynes JG, **Mwinga AG**, Luo N, Zangerle R, Pobee JOM, Wachter H, Dierich MP, McAdam KPWJ, Fuchs D. Neopterin, B2-Microglobulin, and Acute Phase Proteins in HIV-1-Seropositive and Seronegative Zambian Patients with Tuberculosis.*Lung 1997; 175:265-275*
10. Tshibwabwa-Tumba E, **Mwinga A**, Pobee JOM, Zumla A. Radiological Features of Pulmonary Tuberculosis in 963 HIV-infected Adults at Three Central African Hospitals. *Clinical Radiology 1997.*
11. **Mwinga A**, Hosp M, Godfrey-Faussett P, Quigley M, Mwaba P, Mugala N, Nyirenda O, Luo N, Pobee J, Elliott M, McAdam KPWJ, Porter J. Twice weekly tuberculosis preventive therapy in HIV infection in Zambia *AIDS 1998, 12:2447-2457*
12. Chintu C, **Mwinga A**. An African perspective on the threat of tuberculosis and HIV/AIDS - can despair be turned to hope? *The Lancet 1999 353:997*
13. Godfrey-Faussett P, Quigley M, Ayles H, **Mwinga A**, Hosp M, Porter J. Screening people living with HIV before tuberculosis preventative therapy.*AIDS.* 1999 Oct 22;13(15):2190-1.
14. Waddell RD, von Reyn CF, BabooKS, **Mwinga A**, Chintu C, Zumla A. The effects of BCG immunization and human immunodeficiency virus infection on dual skin test reactions to purified protein derivative and Mycobacterium aviumsensitin among adults in Zambia *Int J Tuberc Lung Dis 1999 3(3):255-260*
15. Hosp M, Lisse IM, Quigley M, **Mwinga A** et al. An evaluation of low-cost progression markers in HIV-1 seropositive Zambians. HIV Medicine (2000)1: 125 – 127
16. **Mwinga A.** Prophylaxis for HIV infection in a health setting.HIV/AIDS in the Commonwealth 2000/01. Commonwealth Secretariat Kensington Publications.
17. Waddell RD, Chintu C, Lein AD, Zumla A, Karagas MR, Baboo KS, Habbema JD, Tosteson AN, Morin P, Tvaroha S, Arbeit RD, **Mwinga A,** von Reyn CF. Safety and immunogenicity of a five-dose series of inactivated Mycobacterium vaccae vaccination for the prevention of HIV-associated tuberculosis.*Clin Infect Dis*. 2000 Jun; 30 Suppl 3:S309-15.
18. Bosman M, **Mwinga A**. Tropical Disease and the 10/90 gap. *The Lancet Perspectives*356: December *2000 s63*
19. Quigley M, **Mwinga A**, Hosp M, Lisse I, Fuchs D, Porter JDH, Godfrey-Faussett Long term effect of preventive therapy for tuberculosis in a cohort of HIV-infected Zambian adults.*AIDS 2001, 15:215-222*
20. **Mwinga A**. Drug-resistant tuberculosis in Africa.*Ann N Y AcadSci* 2001 Dec; 953:106-112
21. Chapman AL, Munkanta M, Wilkinson KA, Pathan AA, Ewer K, Ayles H, Reece WH, **Mwinga A**, Godfrey-Faussett P, LalvaniA.Rapid detection of active and latent tuberculosis infection in HIV-positive individuals by enumeration of Mycobacterium tuberculosis-specific T cells.*AIDS* 2002 Nov 22;16(17):2285-93
22. **Mwinga A**, Nunn A, Ngwira B, Chintu C, Warndorff D, Fine P, Darbyshire J, Zumla A; LUSKAR collaboration Mycobacterium vaccae (SRL172) immunotherapy as an adjunct to standard

antituberculosis treatment in HIV-infected adults with pulmonary tuberculosis: a randomised placebo-controlled trial.*The Lancet* 2002 Oct 5;360(9339):1050-5
23. **Mwinga A**, Hosp M, Zulu I, Farthing MJ, Mulambo S, Kelly P. Tuberculosis preventative treatment also prevented diarrhoea in HIV-infected patients in Zambia.*AIDS*. 2002 Mar 29;16(5):806-8.
24. **Mwinga A**, Fourie B. Prospects for new tuberculosis treatment in Africa.*Trop Med Int Healt*h. 2004 Jul;9(7):827-32. Review
25. Johnson JL, Nunn AJ, Fourie PB, Ormerod LP, Mugwera RD, **Mwinga A**, Chintu C, Ngwira B, Onyebujoh P, Zumla A. Effect of Mycobacterium vaccae (SRL172) immunotherapy on radiographic healing in tuberculosis.*Int J Tuberc Lung Dis*. 2004 Nov;8(11):1348-54.
26. **Mwinga A**Challenges and hope for the diagnosis of tuberculosis in infants and young children.*The Lancet*. 2005 Jan 8;365(9454):97-8.
27. Stringer JS, Zulu I, Levy J, Stringer EM, Mwango A, Chi BH, Mtonga V, Reid S, CantrellRA, Bulterys M, Saag MS, Marlink RG, **Mwinga A**, Ellerbrock TV, Sinkala M. Rapid scale-up of antiretroviral therapy at primary care sites in Zambia: feasibility and early outcomes *JAMA.* 2006 Aug 16;296(7):782-93

    Nominated for Charles C Shepard Science Award 2007

28. Ciglenecki, JR, Glyn J, **Mwinga A**, Bgwira B, Zumla A, Fine PEM, Numm A. Population differences in death rates in HIV positive patients. *Int J Tuberc Lung Dis* 2007 11(10) 1121-1128
29. Mulenga LB, Kruse G, Lakhi S, Cantrell RA, Reid SE, Zulu I, Stringer EM, Krishnasami Z, **Mwinga A**, Saag MS, Stringer JS, Chi BH.Baseline renal insufficiency and risk of death among HIV-infected adults on antiretroviral therapy in Lusaka, Zambia.AIDS. 2008 Sep 12;22(14):1821-7.
30. Chi BH, Cantrell RA, Zulu I, Mulenga LB, Levy JW, Tambatamba BC, Reid S, Mwango A, **Mwinga A**, Bulterys M, Saag MS, Stringer JS Adherence to first-line antiretroviral therapy affects non-virologic outcomes among patients on treatment for more than 12 months in Lusaka, Zambia.Int J Epidemiol. 2009 Feb 17.
31. **Mwinga A** Low-income countries: where are we going with TB/HIV in 2009? Int J Tuberc Lung Dis. 2009 Jul;13(7):797-8.
32. Waage J, Banerji R, Campbell O, Chirwa E, Collender G, Dieltiens V, Dorward A, Godfrey-Faussett P, Hanvoravongchai P, Kingdon G, Little A, Mills A, Mulholland K, **Mwinga A**, North A, Patcharanarumol W, Poulton C, Tangcharoensathien V, Unterhalter E.The Millennium Development Goals: a cross-sectoral analysis and principles for goal setting after 2015 Lancet and London International Development Centre Commission**.**Lancet. 2010 Sep 18;376(9745):991-1023
33. Heffron R, Chao A, **Mwinga A,** Sinyangwe S, Sinyama A, Ginwalla R, Shields JM, Kafwembe E, Kaetano L, Mulenga C, Kasongo W, Mukonka V, Bulterys M.High prevalent and incident HIV-1 and herpes simplex virus 2 infection among male migrant and non-migrant sugar farm workers in Zambia.**Sex Transm Infect.** 2011 Jun;87(4):283-8. Epub 2011 Apr 1.
34. Kraft JM, Hill Z, Membe I, Zhang Y, Meassick EO, Monsour M, Maumbi M, Ndubani P, Manengu JM, **Mwinga A**. Effects of the Gama Cuulu radio serial drama on HIV-related behavior change in Zambia. J Health Commun. 2012;17(8):929-45. Epub 2012 May 8.

CHAPTERS IN BOOKS

Mwinga A. Preventive therapy for Tuberculosis in developing countries in McAdam K, Porter J (Editors) Tuberculosis - Back to the Future, Wiley London 1993

Mwinga A Specific problems in developing areas of the world - Africa in Clinical Tuberculosis Editor PDO Davies Second Edition 1998 Chapman Hall Medical

Mwinga A Specific problems of control in Africa in Clinical Tuberculosis Editor PDO Davies Third Edition 2003 Arnold

Mwinga A, Moore BC. Diagnosis, Treatment, and Prevention of Tuberculosis in Infants and Children Living with HIV in From the Ground UP: Building Comprehensive HIV/AIDS Care Programs in Resource Limited Settings. Editors: Marlink R and Teitelman. Elizabeth Glaser Paediatric AIDS Foundation 2009

Oral Presentations at Scientific Conferences

Preventive Therapy for Tuberculosis in Developing Countries
Tuberculosis - Back to the Future, London School of Hygiene and Tropical Medicine London April 1993

Tuberculosis and HIV Infection in Developing Countries.
28th World Conference of IUATLD, Mainz Germany, June 1994

Control of Tuberculosis in developing countries.
Xth International Conference on AIDS Tokyo Japan, August 1994

Management of HIV related conditions in Resource Constrained Contexts. 2nd International Conference on Care in the Home and Community for People living with HIV/AIDS MontrealCanada May 1995

Treatment of tuberculosis in Developing Countries.
The Lancet Conference: Tuberculosis -The Challenge. Washington September 1995

Tuberculosis in Developing Countries- The Plague of the 1990's.
European Societies of Tropical Medicine and Hygiene. First International Conference Hamburg Germany October 1995

Operational Perspectives of Preventive Therapy in Developing Countries.
Africa Regional Conference of the International Union Against Tuberculosis and Lung Disease LomeTogo, November 1995

Emerging Patterns of Tuberculosis in Africa. International Clinical Epidemiological Network global meeting, Victoria Falls Zimbabwe January 1996

Research Laboratories should lead research efforts - in Controversies in TB Control. Annual Congress on Lung Health of the International UnionAgainst Tuberculosis and Lung Disease. Paris, France October 1996

Preventing tuberculosis in HIV Infection - The Way Forward. 12th Conference of the Africa Regional of the International Union Against Tuberculosis and Lung Disease Nairobi, Kenya March 1997

Living positively with HIV/AIDS - Reflections from a medical perspective: Regional Workshop on Sharing Experiences of the Commonwealth Young Positive Living Ambassadors. Lusaka September 1998

Tuberculosis in Africa.Commonwealth Partnership in Medicine Conference - Progress and Promise Edinburgh. October 1998

Recent studies of Preventive Therapy in HIV infection. Global Congress of the International Union Against Tuberculosis and Lung Disease, Bangkok, Thailand November 1998

Tuberculosis Preventive Therapy in HIV infection - an overview. International Conference on AIDS and STD's in Africa Lusaka, Zambia September 1999

Tuberculosis preventive therapy should be offered to all – a debate. XII International Conference on AIDS, Durban, South Africa July 2000.

Ethical Issues of Clinical Trials: High Level Round Table on Targeted Action at major communicable diseases within the context of poverty reduction convened by the European Commission. September 2000

Treatment for Latent Tuberculosis for TB Control in HIV endemic settings. 10th International Congress on Infectious diseases. Singapore March 2002

Clinical challenges of planning a national HIV/AIDS care and treatment program. National HIV/AIDS Care, Treatment and Support Conference, Arusha, TanzaniaDec 13 – 16 2004

Investigator CV: **Musonda Simwinga**

Contact details

Work Address:	Zambart, Ridgeway Main Campus, Nationalist Road, P.O.Box Lusaka Zambia.
Email(s):	Musonda@zamabrt.org.zm
Telephone number(s):	+260-211-254710

Employment History

Current Post

Title:	Senior Social Scientist / Community Engagement Lead		
Institution:	Zambart		
Source(s) of funding:	EDTC, NIH,3ie	**Start date:**	2012
Description of post:	The overall aim of the position is to build social science and community engagement capacity within Zambart. A key responsibility in the PopART study is to develop, conduct, manage, document and analyze community engagement for PopART in Zambia as well as providing supervision and support to the same component in South Africa. Another role is to build the partnership between communities, participants and researchers to make sure that the PopART trial conducts ethical and responsible research and interventions in the study communities.		

Previous posts

Dates	Institution	Job Title & Description
1997-2000	Care International	Monitoring and Evaluation Coordinator
2000-2004	EU- Microprojects Unit (MPU)	Field Operations Manager and the Microcredit and Income Generation Manager
05/2004-11/2004	Microbicide Development Programme (MDP) Zambia	Social Scientist
12/2004 – 04/2005	Africare	Monitoring and Evaluation Manager and Acting Programme Manager
05/2005 to 2011	Zambart	Study Manager for the Zambia and South Africa TB and AIDS Reduction (ZAMSTAR) in Zambia
2012 to date	Zambart	Senior Social Scientist and Community Engagement and Stakeholder Lead for the PopART Study

Educational Qualifications

Dates	University	Subject	Qualification (PhD, BSc etc)
2015	London School of Hygiene and Tropical Medicine	Community Participation in Clinical Trials	PhD
2007	John Hopkins University	Research Ethics fellowship with Fogarty African Bioethics Training Programme	Certificate
1997	Fort Hare University	Policy Studies	MA
1994	University of Zambia	Public Administration and Development Studies	Bachelor of Arts degree

Clinically qualified: Yes☐ No ☒

Clinically active: Yes ☐ No ☒

Relevant Research Support (last 5 years)

Dates	Funder	Project title
2017-2021	EDCTP	Tuberculosis Reduction through Expanded Anti-Retroviral Treatment and Screening (TREATS) Project
01/10/2011	NIH/NIAID/NIDA/NIMH/OGAC via FHI360	HPTN071: PopART: A cluster-randomized trial of the impact of a combination prevention package on population level HIV incidence in Zambia and South Africa
01/10/2015	International Initiative for Impact Evaluation (3ie)	Community-Based Distribution of Oral HIV Self-testing Kits: A pilot intervention and rapid impact evaluation'
2015	UNITAID	HIV Self-testing Africa project/ study (STAR)

Chama Muluba

Personal Details	
• Passport Details	ZN200246 Issued 12.11.10;Expires 19.11.20
• Family and marital status	Single
• Nationality & Date of Birth	Zambian;24, November, 1983
• Languages	Bemba(Native) ,English(Fluent), Nyanja(Basic),
• Summary of qualifications, skills and values	I have a unique skill of being trained in both quantitative and qualitative science; with a good track record and experience. I am a highly motivated, self-driven individual. I love challenges and always willing to learn new concepts and cultures.
• Summary of expertise and experience	Graduate of Master's degree in Public Health majoring in Health Promotion currently working as a Case Control Study Manager at Zambart project. I have worked as a consultant, field supervisor and research assistant at Population Council. I have experience working in donor-funded projects, program design, program implementation and over three years' experience working in the ministry of Education as a Teacher for chemistry and Biology. During the process of obtaining a Master's degree, I was attached to Family Health International as an intern for one (1) year.

Experience History

01 January 2018, to Date

Working as a study manager at Zambart on a multinational study called 'HIV Self-Testing Africa (STAR), Zambia'. The study is being conducted in Malawi, Zambia, Zimbabwe, Lethoto, South Africa, Swaziland and Kenya. The study manager position aims to provide technical leadership for the implementation and evaluation of the different models of HIV self-testing distribution being conducted at facility and community level. Some of my responsibilities include:

- Spearheading the design and management of the STAR project at Zambart while working together with Society for family who are our implementing partner.
- Provides technical leadership and guidance to study staff as well as supervision of technical responsibilities for staff working under the STAR, Zambart with a special interest on evaluation
- Work in close collaboration with other Managers and Coordinators under the the PopART study and other Zambart HIV related studies
- Write project reports and scientific papers with colleagues and independently
- Works in close cooperation with stakeholders in the preparation, implementation, monitoring and evaluation of the study.

- Provides leadership, training and supervision to research nurses reporting
- Work closely with MOH/MCDMCH (district, provincial and national health authorities) and other stakeholders in Oral HIV Self-testing Kits related activities.
- Represent Zambart within the research community, and in relevant scientific fora in sub-Saharan Africa and internationally.
- Working closely with the lead case control researcher to support the quantitative data analysis and writing up of the reports and other publications related to components of the case-control study 1 and 2 within country working closely with South Africa.
- With support from the social science team, developing, conducting, managing and analysing the qualitative component of the study which will solicit for social harms and contextual factors influencing acceptability and use of HIV self-testing kits particular through secondary distribution.
- Contribute to the teaching Programme of UNZA, School of Public Health according to demand

01 October, 2017 to date: PhD candidate in Public health

I'm currently pursuing my PhD in Public Health at Umea University, Sweden. The Subject of my PhD thesis ***is "Community-based Reproductive and Health Systems for Adolescents in Zambia: A realist Evaluation Approach"***. The aim of my PhD thesis is to analyse the implementation of community based health systems that are responsive to the sexual and reproductive health and rights of adolescents in Zambia. I will use the One of full intervention arm in an on-going study called **"Research Initiative to Support the Empowerment of Girls (RISE)"** which is being conducted in 150 schools in Zambia as a case, and a realist approach to understand how context, intervention components and mechanisms work together to transform (or not) 'ordinary' community based health systems into adolescent responsive community based health systems.
The study will employ both qualitative and quantitative methods to answer the following objective

- To formulate a programme theory to explain how the components of the RISE intervention could trigger the transformation of CBHSs into ARCBHSs within the context of Zambia's CBHS and adolescent SRHR policies.
- To explore the experiences, perceptions and roles of adolescents in developing an ARCBHS.
- To analyse the role of community-based health workers in developing a ARCBHS in Zambia
- To analyse how, why and under what circumstances an intervention that engage parents, teachers, adolescents and community health workers in the promotion of adolescents' SRHR can transform 'ordinary' CBHS into ARCBHS.

Currently, I am conducting in conducting interviews with different stakeholders and a desk review to answer the first objective

19 August, 2016 to December 2017

Worked as HIV Self-Testing Study manager. The HIVST study manager position aims to provide

technical leadership for the implementation of the HIVST study in the community-level combination HIV prevention packages, both of which include universal HIV testing and intensified provision of HIV antiretroviral therapy (ART) in 4 PopART communities in Zambia. As study manager, my role was also to ensure key populations including men adolescents and young adults who are not reached by the current HIV testing methods are reached and linked to Antiretroviral therapy if HIV positive. Some of my responsibilities include:

- Assist with the design and management of the HIVST in PopART study in Zambia with a special interest on Community-based Distribution of Oral HIV Self-testing Kits
- Provides technical leadership and guidance to intervention staff as well as supervision of technical responsibilities for staff working under the PopART study with a special interest on Community-based Distribution of Oral HIV Self-testing Kits
- Work in close collaboration with other Managers and Coordinators under the PopART study
- Write project reports and scientific papers with colleagues and independently
- Works in close cooperation with stakeholders in the preparation, implementation, monitoring and evaluation of the study.
- Provides leadership, training and supervision to research nurses reporting
- Work closely with MOH/MCDMCH (district, provincial and national health authorities) and other stakeholders in Oral HIV Self-testing Kits related activities.
- Represent Zambart within the research community, and in relevant scientific fora in sub-Saharan Africa and internationally.
- Working closely with the lead case control researcher to support the quantitative data analysis and writing up of the reports and other publications related to components of the case-control study 1 and 2 within country working closely with South Africa.
- With support from the PopART social science team, developing, conducting, managing and analysing the qualitative component of the case-control study in Zambia, closely liaising with the same component in SA
- Contribute to the teaching Programme of UNZA, School of Public Health according to demand

19 Jan, 2015 to July, 2016

I work as a study manager for the Case Control Study which is nested under the PopART trial. I manage all the processes of the study, some of which include:

- Working with the community HIV care providers in recruiting participants for the study
- Recruiting, training and supervising the research assistants in all the sites and ensuring that the study progress as planned

- Monitoring of the data collection process
- Data analysis and report writing
- Supervising the research assistants

In addition, I recently started working on another study called "Longitudinal Qualitative Study attached to the Case Control study" which in in the initial phase of development. My main duties are:

- To spearhead the development of the study protocol
- Develop the tools for data collection
- Manage the data collection, data analysis and report writing processes after the study has been approved

01 Oct, 2014 to date

Work as a Project Coordinator on the Injectable Polio Immunization Formative Assessment Study funded by UNICEF under the University of Zambia and my roles are:

- Develop the Proposal for grant application
- Develop data collection tools and coordinate the data collection process
- Data analysis and report writing with the aim to write articles for Publication in accredited journals

23 Oct, 2014 to 10 Jan 2015

Worked as a consultant at Population Council and my duties were:

- Supervising qualitative data transcribers
- Cleaning of the collected data and transcribed data
- Coding of data using NVIVO
- Help in analysing and writing of report

04 Aug, 2014 to 25 Sept, 2013

I worked as a field supervisor for Population council during data collection of a study called MARPS. My duties were:

- Supervise Field Team members
- Manage Field Team expenses/allowances
- Ensuring the field team adheres to the study protocol
- Co-ordinate and manage all the daily activities on the site

22 July, 2013 to 25 Oct, 2013

Working as a research assistant at Population Council Zambia

- Conduct in-depth interviews and Focus group discussions
- Mapping and Enumeration of Areas
- Entering statistics for the study participants
- Updating data files and statistics on drop box on a daily basis

01 September 2012-20 October 2014

Studied Master of Public Health (MPH) – Health Promotion with University Of Zambia

- Completed both MPH part I class work and MPH part II research work. The MPH part I class work program involved completion of courses such as Reproductive health, nutrition, health policy and human rights, program planning and management among others.
- Carried out a research entitled **"Social and Clinical Attributes of Patients who Restart Antiretroviral Therapy at 5 ART Centres in Zambia".** This study was done at 5 sites including: Kitwe central hospital, Chipokota Mayamba clinic, Kabwe General Hospital, Liteta Hospital and Machisompola Demo Zone. The research process involved the following stages have been completed.
- Proposal development
- Data collection
- Data analysis
- Defending of the findings of the study
- Submitting a marked dissertation to the University of Zambia
- Submitting one article for publication to any accredited journal. I submitted my manuscript to BioMed Central, Public health and it is currently under review

As a student I also participated in developing research tools, training materials for the CISMAC project under the University of Zambia School of Public Health

April 2013 to June 2014

Worked as an Intern with Family Health International, Lusaka, Zambia

- Participated in all the activities as assigned by supervisors, worked with the different departments of fhi360.
- In collaboration with the FHI360 Mentor, identified a relevant research question that led to the completion of the Master's degree program

02 October 2009 – 28 September, 2015

Ministry of Education

Class Teacher, Monze Boarding High School, Monze

- Teach Biology and Chemistry to High School Pupils.
- Supervising and guiding a class of Boys and girls at class level
- Organised Quiz and Anti AIDS Club for the School.
- Member of the disciplinary committee of the School, deals with issues of discipline concerning pupils

August 2009- September 2009
Spring Fields Coaching centre, Lusaka
Biology "A" Level Tutor

- Taught "A" Level Biology to students

March 2008 – June 2008
Central Statistic Office, Lusaka
Staff Intern

- Worked as a staff on internship with Central Statistics Office as a field data collector and preparing Data for Analysis

Publications

1. Mulubwa, Chama, Oliver Mweemba, Patrick Katayamoyo, and Hikabasa Halwindi. "Social and clinical attributes of patients who restart antiretroviral therapy in central and Copperbelt provinces, Zambia: a retrospective longitudinal study." *BMC public health* 16, no. 1 (2016): 289

2. Sabapathy, Kalpana, Constance Mubekapi-Musadaidzwa, Chama Mulubwa, Ab Schaap, Graeme Hoddinott, Anne Stangl, Sian Floyd, Helen Ayles, Sarah Fidler, and Richard Hayes. "Predictors of timely linkage-to-ART within universal test and treat in the HPTN 071 (PopART) trial in Zambia and South Africa: findings from a nested case-control study." *Journal of the International AIDS Society* 20, no. 4 (2017).

i. erience

- worked with the Field operations team in Lusenga National Park in Laupula Under Zambia Wildlife Authority;
- Participated as a peer Educator under the HIV Response Office (UNZA), by reaching out to people with HIV/AIDS and training youths in Universities, Colleges and Schools;

Educational Qualifications			
Degree/Diploma	University/Board	Class/Marks	Year
• BSc Biological Sciences	University of Zambia	Credit	2009
• Master of Public Health (MPH)	University of Zambia		2014
IT Knowledge			

I am computer literate and work well with all the Microsoft Software applications i.e. Word, Excel and PowerPoint. I can also work with SPSS, STATA, EPIData and NVIVO.

Personal Strengths & Profile

Personal Skills: Responsible, Results Oriented, Objective, Social

Aptitudes: Quick Learner, Very Social, Able to Direct or Supervise

Personal values : Honesty, Integrity, Family, Hard Work

Additional Information

- **References**

1.Dr Joseph Mumba Zulu
Assistant Dean Research
University of Zambia
School of Public Health
Box 32379, Lusaka.
Cell: 0971591388
E-mail: josephmumbazulu@gmail.com

2.Dr P Katayamoyo
Assistant Director TB/ART Care
Family Health International
Box 320303, plot 2055, Nasser road. Lusaka.
Email: pkatayamoyo@fhi360.org

3.Prof. Charles Michelo
Dean, School of Public Health
University of Zambia
School of Medicine
Box 32379, Lusaka.
Cell: 0979232403
E-mail: ccmichelo@yahoo.com

-Available on request: Credentials to support the claims made in this CV (e.g., Details of specific work experiences, certificates, etc.).

L A W R E N C E M W E N G E

E-mails: lawrence@zambart.org.zm

PROFILE: HEALTH ECONOMIST

I'm an enthusiastic, adaptive and fast-learning economist with an acute interest and experience in health economics and health systems research. My major areas of interest are health care financing, economic evaluation and health policy analysis.

Specialties: Economic analysis, cost tracking, Policy analysis, project management, and econometrics and modelling, Project Appraisal, health systems research and health care evaluation.

PROFESSIONAL EXPERIENCE

Zambia AIDS Related TB (ZAMBART) Project, Zambia, 2006-present, Health Economist

Main Roles:

- Lead Health Economist; Managing and coordinating all health economics projects, 2014-present.
- Principle investigator on Economic Evaluation of the Better Health Outcomes through Mentoring and Assessment (BHOMA) interventions, Zambia, 2010-2014.
- Assistant Programme manager; Community TB case finding Programme, 2009-2011.
- Co-Principle investigator on Economic Evaluation of the Zambia South Africa TB and AIDS Reduction (ZAMSTAR) community randomized Trial, Zambia and South Africa, 2006-2010.
- Co-Principle investigator on Economic Evaluation of TB diagnostics; solid and liquid TB culture, Zambia, 2006-2007.

Consultancy Work

- **Institution of Medical Research and Training (IMReT);** Zambia, 2013-present, Health Economics Consultant (Co-principal Investigator).
- **London School of Hygiene & Tropical Medicine (LSHTM);** Health Economics Consultant on economic evaluation of eye health services in Zambia, 2011.
- **AIDS Alliance;** Health Economics Consultant on cost analysis of Home-based care services in Zambia, 2008.

EDUCATION

2012 **MSc in Public Health**, London School of Hygiene and Tropical Medicine; London, UK. **Thesis title:** The Cost of Eye Care Treatment from the Societal Perspective in Zambia.

2006 **BSc in Agricultural Economics**, University of Zambia; Lusaka, Zambia.

1997 **School Certificate ('O' level)**, Mungwi Technical Secondary School; Mungwi, Zambia.

SKILLS TRAINING WORKSHOPS

2012: **Evaluating the costs of public health interventions**: A short-course in applied economic evaluation organised by Boston University and University of Zambia; Lusaka, Zambia.

2011: **Health Care Evaluation**, London School of Hygiene & Tropical Medicine; London, UK.

2009: **Economic Evaluation of health care,** London School of Hygiene & Tropical Medicine; London, UK.

AWARDS

2009 Commonwealth scholarship for distance learning studies to pursue a Master's of Science (MSc) course in Public Health with London School of Hygiene and Tropical Medicine, London, UK.

1999 Best Student award, Community Health workers Training organized by Ministry of Health & JICA at Chawama clinic; Lusaka, Zambia.

1995 Best Student award in Mathematics Olympiads organized by JICA at Mungwi Technical Secondary School; Mungwi District, Zambia.

RESEARCH EXPERIENCE

1. Investigator; *HPTN 071 Population Effects of Antiretroviral Therapy to Reduce HIV Transmission (HPTN 071-PopART): A Cluster-Randomized Trial of the Impact of a Combination Prevention Package on Population-Level HIV Incidence in Zambia and South Africa*, Zambart, 2013-2017.

2. Consulting Economist; *Economic Evaluation of Cryptococcus Meningitis at UTH, Lusaka Zambia*, IMReT, 2012-2014.

3. Principle Investigator; *Cost analysis of better health outcomes through mentoring and assessment (BHOMA) interventions*, CIDRZ and Zambart, 2011-2014.

4. Consulting Economist; Cost-effectiveness analysis of eye services in Zambia, LSHTM, 2011

5. Co-Principle Investigator; *A comparative economic evaluation of TB/HIV community randomized interventions in Zambia and South Africa*, Zambart 2008 to 2009.

6. Consulting Economist; *Cost analysis of home-base care programmes in the era of antiretroviral therapy (HIV): assessing the cost of providing home-based care services in Zambia from provider's perspective*, AIDS Alliance, 2009.

7. Health Economics Research Assistant; *A comparative economic evaluation of MGIT and LJ TB culture techniques in Zambia. Lusaka, Zambia (published)*; Zambart 2007.

8. Health Economics Research Assistant; *assessing costs of tuberculosis (TB) diagnosis and treatment from the patient's PERSPECTIVE in Zambia. Lusaka, Zambia (published)*, Zambart, 2007.

9. Student; *Assessing the relationship between Migration and rural Agriculture in Mungwi district*, UNZA, 2005 (BSc. Thesis).

CONFERENCE PRESENTATIONS

1. Poster: *Cost analysis of TB/HIV reduction models; Enhance Case Finding and Household interventions.* 41st World Conference on Lung health of the International Union Against Tuberculosis and Lung Disease, Cape Town, South Africa, November 2010.

2. Paper: *Cost Analysis of ZAMSTAR TB/HIV Reduction Models*. CREATE Meeting; Cape Town; 2009.

3. Poster: *cost-effectiveness analysis of TB culturing using solid media versus liquid media to diagnose TB in Zambia*. 38th World Conference on Lung health of the International Union Against Tuberculosis and Lung Disease, Cape Town, South Africa, November 2007.

4. Paper: *why Satanism is linked to HIV testing and HIV prevention activities in Zambia (co-presenter)*, Lusaka, Zambia, 2005.Paper: *HIV-related Stigma (Literature review)*. 1st International Conference on HIV/AIDS conference, Dar e salaam, Tanzania, 2004.

6. Poster: *Community Awareness Campaign and the Misconceptions surrounding HIV/TB*. 13th International Conference on AIDS and STIs in Africa, Nairobi, Kenya, 2003.

SELECTED PUBLICATIONS

1. Ulla K Griffiths, Fiammetta M Bozzani, Adrian Gheorghe, **Lawrence Mwenge**, Clare Gilbert. Cost-effectiveness of Eye Care Services in Zambia. Cost Effectiveness and Resource Allocation 2014.

2. **D. Zachary**, **L. Mwenge**, **M. Muyoyeta**, **K. Shanaube**, **A. Schaap**, **V. Bond**, **B. Kosloff**, **P. de Haas**, **H. Ayles.** *Field comparison of OraQuick® ADVANCE Rapid HIV-1/2 antibody test and two blood-based rapid HIV antibody tests in Zambia. BMC Infectious Diseases* 2012.

3. M. Muyoyeta, P. E. W. de Haas, D.H. Mueller, P. D. van Helden, **L. Mwenge**, A. Schaap, C. Kruger, N. C. Gey van Pittius, K. Lawrence, N. Beyers, P. Godfrey-Faussett, and H. Ayles. *Evaluation of the Capilia TB assay for culture confirmation of Mycobacterium tuberculosis in Zambia and South Africa.* J Clin Microbiol. 2010 Aug 4.

4. A. Aspler, D. Menzie, O. Oxlade, J. Banda, **L. Mwenge**, P. Godfrey-Faussett, H. Ayles. *Costs of tuberculosis diagnosis and treatment from the patient perspective in Lusaka, Zambia.* Int J Tuberc Lung Dis 2008.

5. D.H. Mueller, **L. Mwenge**, M. Muyoyeta, M.W. Muvwimi, R. Tembwe, R. McNerney, P. Godfrey-Faussett, H. Ayles. *Costs and cost-effectiveness of tuberculosis cultures using solid media in a developing country*. Int J Tuberc Lung Dis 2008.

Hambweka Munkombwe

Program Manager - Society for Family Health

hambwekam@sfh.org.zm; hambweka@yahoo.com

I have a Masters of Public Health from University of Liverpool, specialising in management of health systems and I have Bachelor Degree (Hons) in Professional Health Studies awarded by Teesside University from Middlesbrough, United Kingdom. In addition, I have a diploma in Clinical Medical Sciences from Chainama College of Health Sciences. Further, I have over 12 years of experience in healthcare programs of which more than 6 years are in managing projects/programs. In my current job, I am managing the HIV self-testing project working in conjunction with Ministry of Health to develop an Operational Framework and guidelines. In my previous job, I managed to grow the HIV treatment program from 3 clinical sites managing about 12,000 clients to 27 sites managing over 60,000 clients. In addition, I have strong experience in managing complex tasks and leading teams to concentrate on agreed tasks.

WORK EXPERIENCE

Program Manager

Society for Family Health - 2017-08 - Present

Zambia

Core Duties are:

- Manage the implementation of UNITAID HIV self-testing (HIVST) STAR Project
- Develop work plans and budgets aimed at guiding the program activities.
- Track progress against targets and provide timely technical support and advice to the implementing teams.
- Provide technical supervision and support to the Regional Managers in order to build capacity to enhance quality of HIVST.
- Track the overall STAR project financial performance by monitoring execution of expenditures against planned activities and control costs to ensure consistence in expenditure with planned activities.
- Represent SFH at the National Ministry of Health, Donors and other collaborating partner meetings.
- Plan workshops and conferences in order to strengthen stakeholder relationships.
- Develop procurement plans for the project materials and other commodities and provide technical support to procurement and warehouse sections to ensure constant availability of stocks as well as procurement of correct commodities.
- Prepare and submit internal and external reports documenting the project's achievements and challenges in order to provide feedback on the progress of the program implementation.
- To provide input in SFH resource mobilization efforts/proposals to ensure resources for the counselling and testing program implementation are included.

Operations Manager

AIDS Healthcare Foundation - 2013-03 - 2017-04

Zambia.

Core duties are:

- Provides direction and integrative coordination in the planning, development and implementation of the program/projects activities and strategies
- Provide technical support to the clinical care teams in ART clinics

- Acts as a focal point person for projects evaluation and performance including client satisfaction surveys.
- Ensures the implementation and adherence to the operating policies and procedures and participates in the review of the policies and procedures as the need arises.
- Serves as principal point of collaboration, leadership and expertise to both internal and external constituencies on operational matters pertaining to the mission, goals, objectives and work scope of the program
- Supports procurement and supply chain management of goods and supplies to supported health facilities.
- Provides leadership and direction to subordinate staff, constituencies and community organizations and representatives in accordance with program goals and objectives
- Participates in annual budget development and management; monitoring of cash flow and variances in the program budget.
- Provide technical support for constructions and renovations for the program facilities
- Participates in interviewing, hiring, orientation and training employees; planning, assigning and directing work;
- Mentors and guides subordinate staff in problem solving issues.
- Provide guidance on Community Health Assistant -HIV Medic program growth and expansion
- Provide leadership and guidance in the HIV Medics training internal and external

Coordinator Task shifting & Field Operations
AIDS Healthcare Foundation - 2009-09 - 2013-03
AHF).
Core Duties were:
- Coordinate ART activities at AHF supported sites in Southern Province
- Ensure proper use of funds provided to the sites by AHF
- Participate in developing QA/QI benchmarks in accordance with the proven evidence
- Work with Ministry of Health and Chainama College of Health Sciences to develop curriculum for 'HIV Medics' a Para-professional task shifting cadre
- Coordinate and participate in trainings of healthcare providers within ART programs while working

Clinician
Chreso Ministries ART Center. - 2007-10 - 2009-09
Duties were:
- Responsible for clinical follow up of patients diagnosed with HIV, assessing eligibility for ART, and initiating
- Highly Active ART (HAART) for those eligible.
- Monitoring and evaluation of patients on HAART, assessing the presence of any clinical, immunological and when possible virological failure and adjusting drugs accordingly
- Providing patient education and counselling which includes prevention of transmission and re-infection, contraception, adherence, drug related side effects and toxicities.
- Answer consultations and manage referrals to the clinic in relation to drug substitution and HIV related complications including management of Opportunistic Infections.
- Participate in Clinical Meetings and provide guidance to fellow staff on quality improvement issues

Clinician
ART In-Charge Mazabuka District Hospital - 2004-07 - 2007-10
Mazabuka.

- Responsible for clinical follow up of patients diagnosed with HIV, assessing eligibility for ART, and initiating
- Highly Active ART (HAART) for those eligible.
- Monitoring and evaluation of patients on HAART, assessing the presence of any clinical, immunological and when possible virological failure and adjusting drugs accordingly
- Providing patient education and counselling which includes prevention of transmission and re-infection, contraception, adherence, drug related side effects and toxicities.
- Plays crucial role in patient census, identifying and evaluating problems and allocating staff assignments appropriately

EDUCATION
Masters of Public Health in Management of Health Systems
University of Liverpool - Liverpool
2017

BSc (Hons) Professional Health Studies
Teesside University
2013

Diploma in Clinical Health Sciences
Chainama College of Health Sciences
2004
SKILLS
Health care, HIV, Microsoft Office, MS OFFICE, qualitative analysis
CERTIFICATIONS/LICENSES

Clinical Officer Practicing licence
2018-12
ADDITIONAL INFORMATION
OTHER SKILLS

- Good organisational skills gained through several experiences and positions within the healthcare systems
- Ability to lead teams with diversity expertise
- Good contact skills with different stakeholders involved in HIV and AIDS activities including Ministry of Health
- Knowledgeable in both qualitative and quantitative research methods
- Strong knowledge in qualitative analysis using content thematic analysis approaches
- Good command of Microsoft Office suit (word, excel and power point presentation)
- Fair knowledge of SPSS application

Namwinga Chintu

NAME **Namwinga Chintu, MD**	**POSITION TITLE** Executive Director and Research lead/Country Representative Society For Family Health/PSI Zambia

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
University of Zambia, Lusaka	BScHB	1992	Human Biology
University of Zambia, Lusaka	MBChB	1996	Medicine and Surgery
University of Liverpool	MTropPed	2004	Tropical Pediatrics
University of Zambia, Lusaka	MMed (Ped)	2005	Pediatrics and Child Health

A. Positions and Honors. List in chronological order previous positions, concluding with your present position. List any honors.

Appointments/employment history

1997 – 2001 *Medical Officer*, Internal Medicine and Surgery, Malcom Watson Hospital, Mufulira, Zambia

2001 – 2002 *Resident Medical Officer*, Pediatrics, University of Zambia Teaching Hospital, Lusaka

2002 *Consultant, Infant and Young Child Feeding*, University of Boston Zambia Exclusive Breastfeeding Study

2002 *Consultant*, UNICEF Botswana/Botswana National Food and Nutrition Commission

2002 – 2004 *Registrar*, Pediatrics, University of Zambia Teaching Hospital, Lusaka

2004 – 2005 *Senior Registrar*, Pediatrics, University of Zambia Teaching Hospital, Lusaka

2005 – present *Honorary Lecturer*, University of Zambia School of Medicine, Department of Pediatrics

2005 – present *PMTCT Coordinator*, Centre for Infectious Disease Research in Zambia

2006 *Consultant*, UNICEF Joint Technical Mission, Assessment of PMTCT and ART programs

2007 – present *Pediatrician*, part-time, University Teaching Hospital / CDC Centre of Excellence for Pediatric HIV Care

2007 – present *Adjunct Assistant Professor*, Pediatrics, University of Alabama at Birmingham School of Medicine

2009-2012 Deputy Director Centre for Infectious Disease Research in Zambia

2009-2012 Principal Investigator Implementation of Programs to Improve the Prevention of Mother to child Transmission; the Care and Treatment of HIV and AIDS in Eastern, Lusaka, and western provinces of the Republic of Zambia

Co Principal Investigator Validating Rapid Syphilis Testing for Prevention of Mother-to-Child Prevention of HIV Programmes; Multi-country Pilot: Swaziland, Tanzania, Zambia

Co PI strategies to improve enrollment of pregnant women into care and treatment programs

Principal Investigator Improving uptake of early infant testing and more efficatious regimen for infants in PMTCT programs

2012- Present Executive Director Society or Family Health and Country Representative Population Services International

2013- Date Board Member Society for AIDS in Africa Custodians and organisors of the IACSA conference

Honors

1996 Nasim Prize for best clinical performance by graduating student in the University of Zambia

1996 Upjohn Prize for best student in Paediatrics and Child Health, University of Zambia

1996 Merck Sharp and Dohme Prize for best student in Internal Medicine, University of Zambia

2003 – 2004 Beit Fellowship for promising and academically outstanding individuals

Board Certification and Licensure

2006 Pediatric Specialist Certification, Medical Council of Zambia

Selected Professional Memberships

2003 – present Member, Medical Women's Association of Zambia

2005 – present Member, MTCT Working Group, National AIDS Council, Zambian Ministry of Health

2005 – present Member, Sub-committee on Reproductive Health, Zambian Ministry of Health

2009 Scientific Committee Member International Workshop on HIV Treatment, Pathogenesis and Prevention Research in Resource Poor Settings (INTEREST workshop)

Selected peer-reviewed publications (in chronological order).

Chi BH, Musonda P, Lembalemba MK, **Chintu NT**, Gartland MG, Mulenga SN, Bweupe M, Turnbull E, Stringer EM, Stringer JS-Universal combination antiretroviral regimens toprevent mother-to-child transmission of HIV in rural Zambia: a two-round cross-sectional study Bull World Health Organ. 2014 Aug 1;92(8):582-92.

Mutale W, **Chintu N**, Amoroso C, Awoonor-Williams K, Phillips J, Baynes C, Michel C, Taylor A, Sherr K; Population Health Implementation and Training – Africa Health Initiative Data Collaborative. Improving health information systems for decision making across five sub-Saharan African countries: Implementation strategies from the African Health Initiative.

BMC Health Serv Res. 2013;13 Suppl 2:S9.

Hirschhorn LR, Baynes C, Sherr K, **Chintu N**, Awoonor-Williams JK, Finnegan K, Philips JF, Anatole M, Bawah AA, Basinga P; Population Health Implementation and Training – Africa Health Initiative Data Collaborative. Approaches to ensuring and improving quality in the context of health system strengthening: a cross-site analysis of the five African Health Initiative Partnership programs.

BMC Health Serv Res. 2013;13 Suppl 2:S8.

Strasser S, Bitarakwate E, Gill M, Hoffman HJ, Musana O, Phiri A, Shelley KD, Sripipatana T, Ncube AT, **Chintu N**. Introduction of rapid syphilis testing within prevention of mother-to-child transmission of HIV programs in Uganda and Zambia: a field acceptability and feasibility study. J Acquir Immune Defic Syndr. 2012Nov 1;61(3)

Mabey DC, Sollis KA, Kelly HA, Benzaken AS, Bitarakwate E, Changalucha J, Chen XS, Yin YP, Garcia PJ, Strasser S, **Chintu N**, Pang T, Terris-Prestholt F, Sweeney S, Peeling RW. Point-of-care tests to strengthen health systems and save newborn lives: the case of syphilis. PLoS Med. 2012;9(6)

Ekouevi DK, Stringer E, Coetzee D, Tih P, Creek T, Stinson K, Westfall AO,Welty T, **Chintu N**, Chi BH, Wilfert C, Shaffer N, Stringer J, Dabis F. Health facility characteristics and their relationship to coverage of PMTCT of HIV services across four African countries: the PEARL study. PLoS One.2012;7(1)

Schöni-Affolter F, Keiser O, Mwango A, Stringer J, Ledergerber B, Mulenga L,Bucher HC, Westfall AO, Calmy A, Boulle A, **Chintu N**, Egger M, Chi BH; Swiss HIVCohort Study; IeDEA Southern Africa. Estimating loss to follow-up in HIV-infected patients on antiretroviral therapy: the effect of the competing risk of death in Zambia and Switzerland. PLoS One. 2011;6(12)

Chi BH, Mwango A, Giganti MJ, Sikazwe I, Moyo C, Schuttner L, Mulenga LB, Bolton-Moore C, **Chintu NT**, Sheneberger R, Stringer EM, Stringer JS. Comparative outcomes of tenofovir- and zidovudine-based antiretroviral therapy regimens in Lusaka, Zambia. J Acquir Immune Defic Syndr. 2011 Aug 18[Epub ahead of print]

Chibwesha CJ, Giganti MJ, Putta N, **Chintu N**, Mulindwa J, Dorton BJ, Chi BH, Stringer JS, Stringer EM. Optimal time on HAART for prevention of mother-to-child transmission of HIV. J Acquir Immune Defic Syndr. 2011 Oct 1;58(2):224-8.

Stringer EM, Vwalika B, Killam WP, Giganti MJ, Mbewe R, Chi BH, **Chintu N**, Rouse D, Goldenberg RL, Stringer JS. Determinants of stillbirth in Zambia.Obstet Gynecol. 2011 May;117(5):1151-9.

Liu KC, Mulindwa J, Giganti MJ, Putta NB, **Chintu N**, Chi BH, Stringer JS, Stringer EM. Predictors of CD4 eligibility for antiretroviral therapy initiation among HIV-infected pregnant women in Lusaka, ZambiaJ Acquir Immune Defic Syndr. 2011 Aug 15;57(5):e101-5.

Chi BH, Vwalika B, Killam WP, Wamalume C, Giganti MJ, Mbewe R, Stringer EM, **Chintu NT**, Putta NB, Liu KC, Chibwesha CJ, Rouse DJ, Stringer JS. Implementation of the Zambia electronic perinatal record system for comprehensive prenatal and delivery care. Int J Gynaecol Obstet. 2011 May;113(2):131-6.

Stringer EM, Ekouevi DK, Coetzee D, Tih PM, Creek TL, Stinson K, Giganti MJ, Welty TK, **Chintu N**, Chi BH, Wilfert CM, Shaffer N, Dabis F, Stringer JS; PEARL Study Team. Coverage of

nevirapine-based services to prevent mother-to-child HIV transmission in 4 African countries. JAMA. 2010 Jul 21;304(3):293-302.

Chintu N, Giganti M, Putta B, Sinkala M Sadoki E, Stringer E , Stringer J. Peripartum nevirapine exposure and subsequent clinical outcomes among HIV-infected women receiving antiretroviral therapy for at least 12 months Chi B . Trop Med Int Health. 2010 Jul;15(7):842-7

Chi BH, Mwango A, Giganti M, Mulenga LB, Tambatamba-Chapula B, Reid SE, Bolton-Moore C, Chintu N, Mulenga PL, Stringer EM, Sheneberger R, Mwaba P, Stringer JS. Early clinical and programmatic outcomes with tenofovir-based antiretroviral therapy in Zambia.. J Acquir Immune Defic Syndr. 2010 May 1;54(1):63-70.

Killam WP, Tambatamba BC, **Chintu N**, Rouse D, Stringer E, Bweupe M, Yu Y, Stringer JS. Antiretroviral therapy in antenatal care to increase treatment initiation in HIV-infected pregnant women: a stepped-wedge evaluation. AIDS. 2010 Jan 2;24(1):85-91.

Mubiana-Mbewe M, Bolton-Moore C, Banda Y, **Chintu N**, Nalubamba-Phiri M, Giganti M, Guffey MB, Sambo P, Stringer EM, Stringer JS, Chi BH. Causes of morbidity among HIV-infected children on antiretroviral therapy in primary care facilities in Lusaka, Zambia Trop Med Int Health. 2009 Oct;14(10):1190-8.

Megazzini KM, **Chintu N**, Vermund SH, Redden DT, Krebs DW, Simwenda M, Tambatamba B, Sinkala M, Stringer JS. Predictors of Rapid HIV Testing Acceptance and Successful Nevirapine Administration in Zambian Labor Wards. J Acquir Immune Defic Syndr. 2009 J Acquir Immune Defic Syndr. 2009 Oct 1;52(2):273-9

Stringer EM, Levy J, Sinkala M, Chi BH, Matongo I, **Chintu N**, Stringer JS. HIV disease progression by hormonal contraceptive method: secondary analysis of a randomized trial.AIDS. 2009 Jul 17;23(11):1377-82.

Stringer EM, Chi BH, **Chintu N**, Creek T, Ekouvie D, Coetzee D, Tih P, Boulle A, Dabis F, Shaffer N, Wilfert CM, Stringer JSA. Monitoring effectiveness of programs to prevent mother-to-child HIV transmission in lower-income countries. Bull World Health Organ, 2008;86:57-62

Chi BH, **Chintu N**, Cantrell RA, Kankasa C, Kruse G, Mbewe F, Sinkala M, Smith PJ, Stringer EM, Stringer JS. Addition of single-dose tenofovir and emtricitabine to intrapartum nevirapine to reduce perinatal HIV transmission.J Acquir Immune Defic Syndr. 2008 Jun 1;48(2):220-3.

Stringer EM, **Chintu N**, Levy J, Sinkala M, Chi BH, Muyanga J, Bulterys M, Megazzini K, Stringer JSA. Declining HIV prevalence among young pregnant women in Lusaka, Zambia. Bull World Health Organ, 2008;86:697-702

Bolton-Moore C, Mubiana-Mbewe M, Cantrell RA, **Chintu N**, Stringer EM, Chi BH, Sinkala M, Kankasa B, Wilson CM, Wilfert CM, Mwango A, Levy J, Abrams EJ, Bulterys M, Stringer JSA. Clinical outcomes and CD4 cell response in children receiving antiretroviral therapy at primary health care facilities in Zambia. JAMA 2007; 298: 1888-99.

Chi BH, **Chintu N**, Lee A, Stringer EM, Sinkala M, Stringer JSA. Expanded services for the prevention of mother-to-child HIV transmission: field acceptability of a pilot program in Lusaka, Zambia. J Acquir Immune Defic Syndr 2007; 45:125-7.

Chi BH, Sinkala M, Mbewe F, Cantrell RA, Kruse G, **Chintu N**, Aldrovandi GM, Stringer EM, Kankasa C, Safrit J, Stringer JSA. Single-dose tenofovir and emtricitabine for reduction of viral resistance to non-nucleoside reverse transcriptase inhibitor drugs in women given intrapartum nevirapine for perinatal HIV prevention: an open-label randomized trial. Lancet; 2007 Nov 17;370(9600):1698-705.

Curriculum vitae : Katherine L Fielding BSc, MSc, PhD

1 PERSONAL DETAILS

Career summary

	From	To
Infectious Disease Epidemiology, London School of Hygiene & Tropical Medicine, UK		
Professor in Medical Statistics and Epidemiology	**08/16**	**-**
On sabbatical at Vanderbilt Institute for Global Health, US	**07/16**	**02/17**
Reader in Medical Statistics and Epidemiology	**11/12**	**07/16**
Senior Lecturer in Medical Statistics and Epidemiology	**10/04**	**10/12**
Lecturer in Medical Statistics and Epidemiology	**10/00**	**09/04**
Research fellow in Medical Statistics and Epidemiology	**02/00**	**09/00**
National Center for Infectious Diseases, Centers for Disease Control and Prevention, USA Visiting Scientist (Biostatistician)	**08/98**	**01/00**
Department of Epidemiology and Public Health, University of Leicester, UK Lecturer in medical statistics	**04/98**	**07/98**
Department of Epidemiology and Public Health, University of Nottingham, UK Lecturer in medical statistics	**01/94**	**03/98**
University of Edinburgh/ MRC Biostatistics Unit Cambridge, (Biostatistical Initiative for AIDS and HIV in Scotland), UK Post-doctoral research post	**01/92**	**09/93**

Degrees

BSc Mathematics, class I	University of Lancaster, UK	1986
MSc Statistics with distinction	University of Sheffield, UK	1987
PhD	University of Sheffield, UK	1991

Contact details	
Address	Department of Infectious Disease Epidemiology, Faculty of Epidemiology and Population Health, London School of Hygiene & Tropical Medicine, UK, WC1E 7HT
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Web address	http://www.lshtm.ac.uk/aboutus/people/fielding.katherine

2 KNOWLEDGE GENERATION

Personal statement

I am a Professor (Reader) in Medical Statistics and Epidemiology, Infectious Disease Epidemiology Department, London School of Hygiene & Tropical Medicine (LSHTM), deputy-director of the TB Centre at LSHTM, honorary professor the University of Witwatersrand, South Africa (May2015-April 2018) and honorary reader in the Institute of Clinical Trials & Methodology, University College London, UK (January 2015- 2020).

My research focuses on the design of intervention studies and evaluation of interventions to reduce the burden of tuberculosis (TB), particularly in settings of high HIV prevalence. Previously I have collaborated with researchers in The Gambia, Guinee and Guinea-Bissau on work investigating the role of genetic and environmental factors in susceptibility to TB. I am senior statistician and am/have been co-investigator on various cluster randomized trials (CRTs) in South Africa and an individually randomized non-inferiority trial conducted in West and Southern Africa. The CRTs include an evaluation of Xpert MTB/RIF in South Africa embedded within their national rollout of the new TB diagnostic. I have worked with the Chinese Center for Disease Control and National TB Control program and Gates Foundation to design and evaluate interventions to improve adherence to TB treatment, using a pragmatic CRT design. I am also part of the investigator team for a large scale multi-country evaluation of scale-up of HIV self testing in sub-Saharan Africa. My role primarily is in the design of such studies, study implementation, statistical analysis and manuscript preparation.

I have sat on Data Safety Monitoring Boards for phase II and III TB treatment trials and phase II TB vaccine trials and currently a member of the methods subgroup of the WHO Global Task Force on TB Impact Measurement.

Research grants awarded (current)

1. **Use of innovative tools and delivery approaches to improve TB control in China: community randomised trial medication monitor adherence strategy**
   Funding body: Bill & Melinda Gates Foundation
   Role: LSHTM PI and lead statistician
   Dates: November 2014 – September 2019; Grant awarded to LSHTM: $629,397

2. **TB-PRACTECAL – pragmatic trial for more effective, considerably shorter and less toxic MDR-TB treatment regimen(s)**
   Funding body: MSF
   Role: LSHTM PI and lead statistician
   Dates: January 2015 – December 2016 (renewal); Grant awarded to LSHTM: £26,890

3. **RIFASHORT: An international multicentre controlled clinical trial to evaluate 1200mg rifampicin daily in the reduction of duration of standard treatment for pulmonary tuberculosis**
   Funding body: GHT
   Role: LSHTM PI and lead statistician
   Dates: January 2016 – December 2019; Grant awarded to LSHTM: £92,651

4. **The STAMP trial: Rapid Urine-Based Screening for Tuberculosis to Reduce AIDS Related Mortality in Hospitalized Patients in Africa**
   Funding body: Global Health Trials
   Role: co-CI (since April 2016) and lead statistician
   Dates: February 2015 – July 2018; overall grant: £2,144,557

5. **Optimizing the efficiency of household contact tracing for TB control in South Africa**

Funding body: South African Medical Research Council, the South African Government's National Department of Health and the UK Medical Research Council (Newton fund)
Role: co-CI and lead statistician
Dates: April 2016 – October 2018; overall grant ZAR 13, 528, 895

6. **Highly TB exposed, persistently uninfected South African gold miners**
Funding body: Bill & Melinda Gates Foundation
Role: co-I and lead statistician
Dates: January 2016 – December 2016; Grant awarded to LSHTM: £18,899

Research grants awarded (recently completed)

1. **TB Fast Track**
Funding body: MRC, WT, DFID (Joint Global Health Trials scheme)
Co-applicants: AD Grant (PI), GJ Churchyard, K Fielding, A Vassall, *et al.*
Role: lead statistician and co-applicant
Dates: January 2012-March 2016 Grant awarded to LSHTM: £3,202,542

2. **Use of innovative tools and delivery approaches to improve TB control in China: community randomised trial of mobile text messaging and medication monitor adherence measures**
Funding body: Bill and Melinda Gates Foundation
Role: LSHTM PI and lead statistician
Dates: November 2009 – December 2012 Grant awarded to LSHTM: $109,587

3. **Effect of community-wide isoniazid preventive therapy on tuberculosis among South African gold miners 'Thibela TB'**
Funding body: Bill & Melinda Gates Foundation
Co-applicants: GJ Churchyard, AD Grant, K Fielding, *et al.*
Role: lead statistician and co-applicant Dates: January 2004 – December 2012

4. **Drug-resistant tuberculosis in South African gold miners**
Funding body: US National Institutes of Health
Co-applicants: Susan Dorman (PI), GJ Churchyard, AD Grant, K Fielding, RE Chaisson.
Role: LSHTM PI, lead statistician and co-applicant
Dates: June 2008 - May 2013 Grant awarded: LSHTM budget $86,628; Overall $3,414,315.

5. **CREATE biostatistics core – extension grant**
Funding body: Bill & Melinda Gates Foundation
Co-applicants: RJ Hayes, L Moulton, K Fielding, RE Chaisson
Role: joint-PI and statistician
Dates: November 2009 – March 2014 Grant awarded to LSHTM: $732,626
6. **Oflotub/Gati for TB - extension**
Funding body: WHO/TDR
Co-applicants: C Lienhardt, O B Sow, J Odhiambo, K Fielding *et al.*
Role: LSHTM PI, lead statistician and co-applicant
Dates: July 2007 – August 2014 Grant awarded to LSHTM: $600,415
7. **XPHACTOR - Xpert MTB/RIF for diagnosis of tuberculosis: evaluating impact and cost-effectiveness in routine roll-out in South Africa**

Funding body: Bill & Melinda Gates Foundation
Co-applicants: AD Grant (joint PI), GJ Churchyard (joint PI), K Fielding, A Vassall, M Nicol, *et al.*
Role: lead statistician and co-applicant
Dates: November 2011-May 2015 Grant awarded: LSHTM budget $749,968; Overall $3,340,991.

8. **XTEND - Xpert MTB/RIF for diagnosis of tuberculosis: evaluating impact and cost-effectiveness in routine the roll-out in South Africa**
Funding body: Bill and Melinda Gates Foundation
Co-applicants: GJ Churchyard, K Fielding, AD Grant, A Vassall, M Nicol, *et al.*
Role: LSHTM PI, lead statistician and co-applicant
Dates: November 2011 – May 2015 Grant awarded: LSHTM budget $285,257; Overall $10,557,909.

Research degree supervision (supervisor/co- supervisor)

	Name	Title	from	to
PhD	Titus Divala	Diagnostic value, clinical benefit, or antimicrobial resistance (AMR) propagation, associated with the current practice of empirically using pneumonia antibiotics in the diagnostic algorithm for TB?	2018	ongoing
PhD	Augustine Choko	PArtner-provided HIV Self-Testing and Linkage (PASTAL) in antenatal care clinics: methodology and delivery of an adaptive cluster-randomised trial in Blantyre, Malawi	2014	ongoing
PhD	Jennifer Thompson	Statistical design and analysis of cluster-randomised stepped wedge / phased implementation trials	2014	2018
PhD	Salome Charalambous	Clinic-level determinants of outcomes on antiretroviral therapy in South Africa	2008	2012
PhD	Molebogeng Rangaka**	The epidemiology, prevention and prediction of HIV-associated TB: Evaluating the contribution of T-cell immunoassays to TB control in a high-burden country.	2008	2012
PhD	Patrick Phillips	Identifying and evaluating prognostic and surrogate markers for response to treatment for tuberculosis	2005	2009
PhD	Sara Nam	Psycho-social risk factors of Highly Active Antiretroviral Therapy (HAART) virological failure among adult HIV-patients in Gaborone, Botswana	2002*	2009
DrPH	Christina Rundi	Factors prolonging time period from onset of symptoms to start of treatment among smear positive PTB patients in Sabah, East Malaysia	2004	2008

*** supervisor from 2004-; ** co-supervisor**

PhD advisory committees		
Name	**Title**	**Completed**
Ankur Gupta-Wright	Immune responses in HIV-TB patients admitted to hospital who die and/or have positive urine-TB diagnostic assay, and predicting mortality in hospitalised HIV-TB patients, a clinical predictor score development and validation	ongoing
Andrew Auld	Evaluating Impact of the Xpert MTB/RIF Assay Combined with Intensified Tuberculosis Case Finding Interventions on Outcomes of Antiretroviral Therapy Enrollees in Botswana: a Stepped-Wedge Cluster Randomized Trial	ongoing
Palwasha Khan	Household and community risk factors for Mycobacterium tuberculosis infection in the under-5s in a rural HIV-prevalent setting	ongoing
Sanj Karat	An autopsy study exploring the spectrum of disease in individuals with advanced HIV in primary care clinics in South Africa	2017
Yasmeen Hanifa	TB symptomatology amongst patients attending for HIV care in South Africa within the context of a study that evaluates a novel Xpert MTB/RIF based diagnostic algorithm	ongoing
Vicky Johnston	First-line ART failure management in resource-limited settings: using observational data to inform decisions to switch from first- to second-line ART	2014
Nathaniel Chishinga	Adherence to ART in Zambia	2015
James Seddon	Multidrug-resistant tuberculosis in children	2014
Kwame Shanaube	Quantiferon-TB Gold In Tube and tuberculin skin tests results In Zambia and South Africa for measuring TB infection and factors associated with incident TB disease.	2015
Monde Muyoyeta	Cohort study of community based TB suspects	2015
Saleha Hassan	Modulation of human immune responses during anti-tuberculosis treatment	2011
Francois van Loggerenberg	Effect of an intervention to promote adherence to antiretroviral therapy in South Africa	2011
Delia Boccia	The social epidemiology of tuberculosis: a study in Zambia	2010
Anneke Hesseling	Direct and non-specific effects of BCG in HIV-exposed and infected South African infants	2009
Maysoon Dahab	Factors affecting adherence and retention to antiretroviral therapy among adults in South Africa	2008
Ali Judd	Epidemiology of hepatitis C virus infection in injecting drug users in London	2004
Modest Mulenga	Treatment for moderate to severe malaria among children in Zambia	2004
Pam Sonnenberg	Classical and molecular epidemiological studies of tuberculosis in the South African gold mines	2003

- 2000

Bedi N, Chilvers C, Churchill R, Dewey M, Duggan C, **Fielding K,** Gretton V, MillerP, Harrison G, Lee A, Williams I Assessing effectiveness of treatment of depression in primary care. Partially randomised preference trial"*Br-J-Psychiatry*. 2000 177312-8.

Churchill R, Allen J, Denman S, Williams D, **Fielding K**, von-Fragstein M "Do the attitudes and beliefs of young teenagers towards general practice influence actual consultation behaviour?" *British Journal of General Practice*. 2000; **50**: 953-7.

Glaser AW, Furlong W, Walker DA, **Fielding K** *et al* "Applicability of the Health Utilities Index to a population of childhood survivors of central nervous system tumours in the United Kingdom" *European Journal of Cancer* 1999: **35**; 256-61

Kendrick K, Marsh P, **Fielding K,** Miller P "Preventing injuries in children: cluster randomised controlled trial in primary care" *BMJ* 1999: **318**; 980-3

CAPC Study group "How Disabling is Depression? Evidence from a Primary Care Sample" *British Journal of General Practice* 1999: **49**; 95-8

Hippisley-Cox J, **Fielding K**, Pringle M "Depression as a risk factor for ischaemic heart disease in men: population based case-control study" *BMJ* 1998: **316**; 1714-9.

Trezies AJH, Lyons AR, **Fielding K**, Davis TRC SA "Is occupation an aetiological factor in the development of trigger finger?" *Journal of Hand Surgery* 1998: **4**; 539-40

Sadiq SA, **Fielding K**, Vernon SA "The effect of timolol drops on respiratory function" *Eye* 1998: **12**; 386-9

Hippisley-Cox J, Hardy C, Pringle M**, Fielding KL**, *et al* "Are patients who present late with cancer registered with low referring practices?" *British Journal of General Practice* 1997: **47**; 731-2

Lyons A, Ng C, **Fielding KL** *et al* "Pituitary dysfunction in recently post menopausal women" *Clinical Endocrinology* 1997: **47**; 431-8

Hippisley-Cox J, Hardy C, Pringle M, **Fielding KL**, Carlise R Chilvers C "The effect of deprivation on variations in general practitioners referral rates': a cross sectional study of computerised data on new medical and surgical outpatient referrals in Nottinghamshire " *BMJ* 1997: **314**; 1458-61

Brettle RP, Raab GM, Ross A, **Fielding KL**, Gore SM "HIV infection in women: immunological markers and the influence of pregnancy" *AIDS* 1995: **9**; 1177-84

Fielding KL, Brettle RP, Gore SM, O'Brien F, Wyld R, Robertson RJ and Weightman R "Heterosexual transmission of HIV analysed by generalized estimating equations" *Statistics in Medicine* 1995: **14**; 1365-1378

Bird G, Cook R, De Angelis D *et al* "Immunological marker paths for seroconversion - single determinants of immunoglobin A and ß2 microglobin are not adequate to estimate time of HIV infection" *AIDS* 1994: **8**; 923-933

Bird G, Cook R, De Angelis D *et al* "Immunological markers of AIDS progression - consistency across 5 HIV infected cohorts" *AIDS* 1994: **8**; 911-921

Raab GM, **Fielding KL** and Allardice G "Incorporating HIV test data into forecasts of the AIDS epidemic in Scotland" *Statistics in Medicine* 1994: **13**; 2009-2020

3 EDUCATION

Module/short course organiser:

- Currently co-organiser of the 'Statistical Methods in Epidemiology' module (2402) [2006-present]. This is a large Term 2 module (approximately 230 registered students for the academic year 2015/6) and which has consistently excellent evaluations (96% of students rated the overall course as very good/good last year). Stepped down from organisatipon in 2016/7 as on sabbatical
- Previously co-organiser of the highly successful two week short course 'Advanced Course in Epidemiological Analysis' [2002-2006].
- Previously co-organiser of the module 'Analysis and Design of Research Studies' (3196) [2000-2001]. The module received very good evaluations following the restructure I devised and implemented.

Teaching programme developments:

- Statistical Methods in Epidemiology (SME) - major contribution to the revision and management of material which included preparing material for three new lectures/sessions and devising the module assessment (conducted in 2007-2010).
- Analysis and Design of Research Studies - major restructure of the module (conducted in 2000).
- Advanced Statistical Methods in Epidemiology (ASME) - contribution to the revision of material which included a major revision of material for a lecture and devising the module assessment (conducted in 2006-7).
- Advanced Statistical Methods in Epidemiology, distance learning - contribution to the revision of material which included revising course materials for one block and supervising revision of material on a second block (conducted in 2008-9).

Modules/courses delivered

I have a major lecturing and facilitating role on a wide range of LSHTM modules/short courses, including:

- Statistical Methods in Epidemiology (module): lecturing [2006-present], practical/seminar leader [2001- present]
- Advanced Statistical Methods in Epidemiology (module): lecturing [2002-present], practical/seminar leader [2000- present]
- Intensive Course in Epidemiology and Medical Statistics (short course): lecturing [2000-2006] and practical/seminar leader [2000-2006]
- Advanced Course in Epidemiological Analysis (short course): lecturing [2001-2005], practical/seminar leader [2001-2005]
- Analysis and Design of Research Studies (module): lecturing [2000-2001] and practical/seminar leader [2000-2001]

Distance Learning tutor for MSc Epidemiology: Principles and Practice

- Statistical Methods in Epidemiology (EP202): [2001-2002]
- Advanced Statistical Methods in Epidemiology (EP304): [2002- present]

4 INTERNAL CONTRIBUTION

1. Deputy-director of the TB Centre (stepped down in July 2016 when sabbatical started)
2. Deputy-chair of the EL MSc Epidemiology exam board (stepped down in July 2016 when sabbatical started)

   Previous:
3. Research Degree co-ordinator (2006-2009)
4. Member of the Clinical Trials sub-committee
5. Member of Senate (formerly the School Council) from 2002-2008
6. Research Degree co-ordinator (2006-2009)

5 EXTERNAL CONTRIBUTION

Data Safety and Monitoring Board (DMSB) member:

1. Two phase III non-inferiority clinical trials of shortening regimens versus standard regimen for the treatment of pulmonary TB (ReMox and for Rifaquin). Completed.
2. Phase II multiple arm, multiple stage, open label, randomized, controlled clinical trial to evaluate four treatment regimens in adult subjects with newly diagnosed, smear-positive pulmonary tuberculosis. Completed.
3. Phase II TB vaccine study in subjects with latent tuberculosis infection (RUTI®). Completed.
4. CARING STUDY (Community Action Research to Improve Nutrition and Growth in rural India) - current
5. SHINE Trial (A randomised trial of therapy shortening for minimal tuberculosis in children) - current
6. Phase IIA TB vaccine (RUTI®) study in subjects with MDR TB – current
7. STOP HCV-1: Stratified Treatment OPtimisation in HCV-1 phase III study - current

Trial Steering Committee:

1. Chair of the Trial Steering Committee for the CHEPETSA study (Impact of a New Molecular TB Test on TB/HIV Outcomes among HIV-Infected Malawians) - current
2. Member of the Technical Advisory Group for a three arm cluster randomised trial assessing interventions to reduce burden of diabetes in Bangladesh – current

Other activities

1. Invite to speak at satellite session “Presentation of TB ReFLECT: an integrated analysis of the fluoroquinolone clinical trials for TB treatment”, TB Union conference, Liverpool, 2016.
2. Invited to speak at an NIH/BMFG-funded TB transmission meeting (“Towards Zero New TB Infections: Research Needs for Halting TB Transmission”) in Washington DC, USA, 2016.
3. Steering Committee member for Critical Path to TB Drug Regimens and the WHO Global TB Programme collaboration (2015-)
4. Consultant for WHO on systematic reviews for MDR TB treatment (2015)
5. Consultant for WHO Global Task Force on TB Impact Measurement (2008, 2015)
6. Consultant for WHO Global Task Force on TB Impact Measurement Sub-group on TB prevalence surveys, Geneva, Switzerland (2014)
7. Contributed to a grant writing workshop for the South Africa Tuberculosis AIDS Training (SATBAT) initiative and provide expert advice on protocol development for attendees (2007-2014)

8. HIV Vaccine Trials Network workshop to develop a proposal to aid in defining eligibility criteria for phase 1 HIV vaccine trials, Washington DC, USA (2009)
9. Consultant to the International Atomic Energy Authority on a multi-country study to evaluate the role of molecular and other rapid drug susceptibility methods in the detection of drug resistant tuberculosis (2002)
10. External examiner for the Masters in Public Health, Nottingham University, UK (2001-2004).
11. PhD examiner (June 2009, August 2011, December 2011).
12. Refereed papers for a wide variety of journals

Melissa Neuman, ScD MS

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Educational Qualifications

Harvard School of Public Health, Sept. 2008-Nov. 2012

Sc.D., (Ph.D. equivalent), Social and Behavioural Sciences, awarded November 2012

- Major field: social epidemiology; minor fields: quantitative research methods, health and policy
- Thesis topic: Urban residence, socioeconomic status, and nutritional status among women in low- and middle-income settings

Columbia University, Sept. 2002-May 2004

M.S., Urban planning, awarded May 2004

- Major fields: international planning, planning and public health.
- Thesis topic: Urban planning and public health in Johannesburg, South Africa
- Prizes: Robert C. Weinberg award for academic excellence in urban planning, William Kinne Fellows Prize.

Additional training

- Post-graduate certificate in learning and teaching (PGCILT), LSHTM, 2017.
- Introduction to Bayesian Analysis, University College London Institute of Child Health, November 2013.
- Leadership in Action, University College London, November 2013
- Advanced Structural Equation Modelling and Generalized Latent Variable Methods, University of Manchester, June 2013

Clinical status: Not clinically qualified

Employment

Department of Infectious Disease Epidemiology and MRC Tropical Epidemiology Group, London School of Hygiene and Tropical Medicine

Assistant Professor, October 2016-present. Coordinated quantitative data collection and epidemiologic analyses for multi-country study of feasibility, acceptability, and accuracy of HIV self-testing in sub-Saharan Africa (HIV STAR project).

- Developed quantitative data collection tool for use across three STAR countries, and coordinated local programming of data tool.
- Wrote analysis plans for trials in Zimbabwe and Malawi and study of clinical performance of HIV self-test in Zambia, calculated sample sizes, and provided other statistical support as needed.
- Coordinated periodic meetings of investigators and data managers to ensure smooth progress on research and data analysis.
- Drafted protocols and abstracts for publication or presentation.

Institute for Global Health, University College London

Research Associate, Jan. 2013-September 2016

- Coordinated creation and dissemination of comparative data collected on over 200,000 mother-child pairs in Bangladesh, India, Malawi, and Nepal. This task included cleaning datasets, standardizing variables, creating data documentation, and preparing data for archiving and external use
- Authored analyses on determinants of caesarean section, and behaviour changes resulting from a participatory intervention to improve newborn survival
- Advised on study design and statistical analysis for community randomized controlled trials assessing the impact of food and/or cash vouchers on child malnutrition in emergency settings
- Developed terms of reference for and supervised two research assistants conducting formative research on environment and nutrition in Nepal and Malawi
- Served as member of department bursaries and PhD advisory committees
- Co-authored proposals for external support, with proposal requests totalling £2.5 million.

World Health Organization/American University of Beirut
Research Consultant, July 2009-December 2014

- Conducted comparative research on the quality and utilization of different modes of HIV testing and counselling, including voluntary testing, provider-initiated testing, and antenatal testing, in four countries in Sub-Saharan Africa
- Collaborated with in-country partners to ensure data quality, provided technical assistance for data entry and in-country analysis, supervised data cleaning consultant, and maintained data online
- Co-authored papers comparing quality of services provided across modes of testing, and assessing differences in the socioeconomic profile of users of different modes of testing
- Authored papers using quantitative and mixed methods to determine whether HIV-related stigma affected testing and care-seeking behaviour

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Teaching responsibilities

- Lectures on principles of social epidemiology and measurement population health inequalities to undergraduates and post-graduate studies at UCL (2015-2017) and LSHTM (2016-2018).
- Developed a new, field-research focused curriculum for a master's of public health program established in Kolkata, India. For this project, I developed curriculum materials, including learning objectives, lectures, and student activities, for a seven-week module on the social determinants of health in lower income settings, three sessions on study design for public health evaluation, and single-week sessions on injuries and violence, chronic disease, and inter-sectionality and health. (2015-2016)
- Served as module organizer for Statistical methods for Epidemiology (SME), LSHTM (2017) and Basic Epidemiology (2018)
- Led tutorial sessions for Statistics for Epidemiology and Public Health, Statistical methods for epidemiology, and Advanced Statistical Methods for Epidemiology (2016-2017)
- Supervise 1 PhD student and serve on advisory committee for two others (LSHTM, 2018)

- Supervised dissertations for undergraduate and post-graduate research dissertations at LSHTM (2015-2018), UCL (2013-2014) and Ludwig-Maximilian-Universitaet Muenchen (2014).

Publications – M. Neuman

Seward, N., **M. Neuman**, T. Colbourn, D. Osrin, S. Lewycka, K. Azad, A.Costello, S. Das, E. Fottrell, A. Kuddus, D. Manandhar, N. Nair, B. Namibar, N.S. More, T. Phiri, P. Tripathy, and A. Prost. "Effects of women's groups practising participatory learning and action on preventive and care-seeking behaviours to reduce neonatal mortality: A meta-analysis of cluster-randomised trials." *PLoS Medicine,* 5 December 2017.

Busert, L.K., **Neuman, M**., Rehfuess, E.A., Dulal, S., Harthan, J., Chaube, S.S., Bhandari, B., Costello, H., Costello, A., Manandhar, D.S. and Saville, N.M., 2016. Dietary Diversity Is Positively Associated with Deviation from Expected Height in Rural Nepal. *The Journal of nutrition*, *146*(7), pp.1387-1393.

Bott, S., **M. Neuman**, S. Helleringer, A. Desclaux, C.M. Obermeyer, and the MATCH study group. "Rewards and challenges of providing HIV testing and counselling services: health worker perspectives from Burkina Faso, Kenya and Uganda." *Health Policy and Planning,* 17 September 2014.

Neuman, M., G. Alcock, K. Azad, A. Kuddus, D. Osrin, N.S. More, N. Nair, P. Tripathy, C. Sikorski, N. Saville, A. Sen, T. Colbourn, T. Houwelling, N. Seward, D.S. Manandhar, B. Shrestha, A. Costello, A. Prost. "Prevalence and determinants of caesarean section in private and public health facilities in underserved South Asian communities: cross-sectional analysis of data from Bangladesh, India, and Nepal." *BMJ Open,* 2014. PMCID: PMC4283435.

Neuman, M., I. Kawachi, S. Gortmaker, SV Subramanian. "National economic development and disparities in body mass index: a cross-sectional study of data from 38 countries." *PLoS One,* 11 June 2014. PMCID: PMC4053361

Obermeyer, C.M, **M. Neuman**, and the MATCH study group: Anita Hardon, Alice Desclaux, Rhoda Wanyenze, Odette Ky-Zerbo, Peter Cherutich, Ireen Namakhoma. "Socioeconomic determinants of HIV testing and counselling: A comparative study in four African countries" *Tropical Medicine and International Health,* 18 (9): 1110-1118. September 2013. PMCID: PMC3808878

Neuman, M., C.M. Obermeyer. "Experiences of Stigma, Discrimination, Care and Support Among People Living with HIV: A Four Country Study." *AIDS and Behavior,* 17:1796–1808. June 2013. PMCID: PMC3671197.

Neuman, M., I. Kawachi, S. Gortmaker, SV Subramanian. "Urban-rural differences in BMI in low- and middle income countries: The role of socioeconomic status. *American Journal of Clinical Nutrition,* 97(2): 428-436. February 2013. PMCID: PMC3742298

Corsi, D., **M. Neuman,** J. Finlay, SV Subramanian. "Demographic and Health Surveys: A Profile." *International Journal of Epidemiology*, 41(6): 1602-1613. December 2012.

Obermeyer, C.M., **M. Neuman**, A. Desclaux, R. Wayenze, O. Ky-Zerbo, P. Cherutich, I. Namakhoma, A. Hardon. "Associations between mode of HIV testing and consent, confidentiality and referral: A

comparative analysis in four African countries." *PLoS Medicine,* 9 (10). October 2012. CID: PMC3479110

Neuman, M., Subramanian, S.V., Finlay, J.E, and G. Davey Smith. "The poor stay thinner: stable socioeconomic gradients in BMI among women in lower- and middle-income countries." *American Journal of Clinical Nutrition*, 94: 1348-1357. November 2011. PMCID: PMC3192480

Subramanian, S.V., J.E. Finlay, and **M. Neuman**. "Global Trends in Body Mass Index." *The Lancet* 377: 1915-1916. 4 June 2011.

Bernadette Hensen

Tel: +44 7951 586 691
Email: berniehensen@gmail.com

Expertise & Skills

Epidemiology	Expert in systematic review methodology
Evaluation of Public Health Interventions	Quantitative data analysis
Extensive knowledge of HIV testing services in Africa	Proposal and protocol development
Extensive knowledge of HIV prevention programming	Project Management
Proficient in English, Dutch, French, Portuguese	Editing/writing

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EMPLOYMENT AND DOCTORAL-RESEARCH HISTORY

Aug 15 –

Research Fellow, London School of Hygiene and Tropical Medicine, UK

- Technical input to the design of impact evaluations and other epidemiological studies
    - Lead writer of protocols
    - Design theory of change and other process evaluation related content
    - Lead or support questionnaire development
- Marking for Advanced Statistical Methods in Epidemiology assessed assignments (distance learning)
- Co-lead of a systematic review of reviews of HIV prevention interventions in low- and middle-income countries
- Data analysis to explore factors associated with HIV-testing among key populations in Cambodia

Oct – Dec: Short term consultancy with WHO - strategies to increase uptake of medical male circumcision services

Sep 11

PhD Candidate, PhD Epidemiology & Evaluation, London School of Hygiene and Tropical Medicine

- Systematic review of strategies to increase uptake of HIV-testing by men in sub-Saharan Africa
- Analysis of secondary data to explore men's HIV-testing behaviours in the context of expanded availability of HIV testing services and to evaluate the contribution of the medical male circumcision programme to men's levels of HIV-testing in Zambia
- Analyses used methods appropriate for correlated data and for cluster randomised trials, including random effects logistic regression and cluster-level summaries
- Primary data collection on the promotion of medical male circumcision services, which included development of data collection tools, training and managing a team of research assistants
- Support to a trial to evaluate a health systems strengthening intervention – including training of research assistants, modification of data collection tools, development of standard operating procedures

Mar 09 Sep

Research Assistant & Programme Manager, Zambia-South African TB and AIDS Reduction Study (ZAMSTAR); London School of Hygiene and Tropical Medicine, London, UK

- Seconded as HIV Consultant to the World Health Organization
    - Conducted reviews of HIV-testing and counselling policies and studies
    - Worked on the development of the WHO's strategic policy document: Service delivery approaches to HIV testing and counselling: a strategic HTC policy framework. 2012
- Worked on the evaluation of the community health worker component of a complex intervention in Zambia, developing questionnaires, training research assistants and leading database development and entry
- Produced research briefings to highlight ZAMSTAR research findings: Improving Access to TB Services through Community Engagement; Contributing to Evolving TB Control Strategies: Research to Influence Policy and Practice
- Research assistance to a UNICEF programme on the quality and scale of national HIV projects in 20 countries
- Technical support on funding proposals, including:
    - M&E strategy and logical framework sections of a proposal for the UK Department for International Development (DFID)
    - Justification for a proposal submitted to 3ie to evaluate how an existing Doris Duke funded project works to strengthen different levels of the health systems
- Co-organised and taught an AIDS module of approximately 50 MSc students

Programme Management:

- Support to Zambian AIDS-related TB ZAMBART Project staff
- Budget & grant management
    - Managed grants of up to $15 million (e.g. Bill and Melinda Gates' Grant)
    - Budget oversight, including expenditure monitoring and management
    - Financial reporting to donors

Aug 08

HTSPE Ltd: Programme Manager, the Livelihoods Resource Centre (LRC), UK

- Development of consultancy tenders requested by the UK Government's DFID Advisers
    - Assignment of suitable consultants affiliated to the centre to each new tender
    - Monitoring and evaluation of consultants' outputs
- Liaison with DFID
    - Marketing visits to DFID Malawi, Uganda & Kenya
    - Represented the LRC weekly at DFID London
    - Prepared monthly livelihoods newsletters for DFID Advisers

Oct 07

Christian Aid: Consultant, Community Based Care for Orphans and Vulnerable Children (CBCO) Programme, Zambia

- Recognising a gap in the programme, I developed a Basic Healthcare Training Manual for use by programme beneficiaries

- Support to local implementing partners to strengthen programme implementation, monitoring, and evaluation, which included:
    - Monitoring visits and liaison with programme beneficiaries
    - Work plans with partners and following up on action points
    - Training and development of new data capture and monitoring tools
    - Budget management
    - Capacity development of partner organisations

Aug – Oct. 07 Christian Aid: Volunteer, HIV Unit: Research support to HIV Unit

- Support to funding proposal development and ad hoc research

June 04

Pharmaprojects, Informa: **Editorial Executive**, **London, UK**

- Research feeding into updating Pharmaprojects, a pharmaceutical R&D news pipeline
- Writing press releases, lead articles for monthly client newsletter
- Technical proofreading and editing
- Training editorial assistants
- Attending international conferences to actively seeking and maintain company contacts

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ACADEMIC DETAILS

2011-2015	PhD Epidemiology and Public Health Evaluation
2006-2007	MSc Control of Infectious Diseases, London School of Hygiene and Tropical Medicine
2000-2003	BSc Pharmacology, King's College London

PUBLICATIONS

1. Krishnaratne S, **Hensen B**, et al (2016). Evidence for interventions to strengthen the HIV prevention cascade: a systematic review of reviews. Lancet HIV (*accepted for publication*)
2. **Hensen B**, Lewis JJ, Schaap A et al (2015). Frequency of HIV-testing and factors associated with multiple lifetime HIV-testing among a rural population of Zambian men. *BMC Public Health;* 15: 960
3. Hargreaves J, Davey C, Fearon E, **Hensen B**, Krishnaratne S (2015). Trends in socioeconomic inequalities in HIV prevalence among young people in seven countries in eastern and southern Africa. *PLoS One*.
4. **Hensen B**, Taoka S, Lewis JJ, Weiss H & Hargreaves J. (2014). Systematic review of strategies to increase men's HIV-testing in sub-Saharan Africa. *AIDS.*
5. **Hensen B**, Lewis JJ, Schaap A et al (2014). Factors Associated with HIV-Testing and Acceptance of an Offer of Home-Based Testing by Men in Rural Zambia. *AIDS and Behav*
6. Baggaley R, **Hensen B**, Ajose O et al (2012). From caution to urgency: the evolution of HIV testing and counselling in Africa. *Bulletin of the World Health Organization.*
7. **Hensen B**, Baggaley R, Wong V, Grabbe K, Shaffer N, Lo Y-R, Hargreaves J (2011). Universal Voluntary HIV Testing in Antenatal Care Settings: a Review of the Contribution of Provider-Initiated Testing & Counselling. *Tropical Medicine & International Health.*

8. Shanaube K, Hargreaves J, Fielding K, Schaap A, Lawrence KA, **Hensen B**, Sismanidis C, Menezes A, Beyers N, Ayles H, Godfrey-Faussett P (2011). Risk Factors Associated with Positive QuantiFERON-TB Gold In-Tube and Tuberculin Skin Tests Results in Zambia and South Africa. *PLoS One*. 6, 4.
9. **Hensen B.** (2005) Cannabinoids therapeutics: high hopes for the future. Drug Discovery Today. 10;7: 459-462

BOOK CHAPTERS

1. Garnett G, Krishnaratne S, Harris K, Hallett TB, Santos M, Enstone JE, **Hensen B**, Dallabetta G, Revill P, Gregson S, Hargreaves JR. The Cost-Effectiveness of Interventions to Prevent HIV Acquisition. Disease Control Priorities 3. (Accepted for publication)

FUNDING
Gordon Smith Travelling Grant
Economic and Social Research Council (ESRC) 3 year PhD Scholarship

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CONTRIBUTION TO NORMATIVE GUIDANCE
One of five lead writers *Service delivery approaches to HIV testing and counselling (HTC): a strategic HTC policy framework.*
External peer reviewer *Consolidated guidelines on HIV testing services 2015.*

ADDITIONAL TRAINING & SKILLS
Modules Completed during PhD Training: *Extended Epidemiology, Epidemiology in Practice, Statistical Methods in Epidemiology, Advanced Statistical Methods in Epidemiology*
Short Courses: Questionnaire Design
Languages: Dutch (Native); English (Native); Portuguese (Advanced); French (Intermediate); German (Beginner) and Spanish (Beginner)
Trained Point of Care HIV Tester (INSTI rapid test)

Cheryl Case Johnson, M.A.
Geneva · cheryl.llc@gmail.com · johnsonc@who.int

Skills & Experience Summary

Experience: 6+ years domestic and international public health experience in limited resource settings; 5+ years specializing in HIV/AIDS. Expertise in HIV testing, HIV self-testing (HIVST) and linkage-to-care

Methodologies: Systematic Reviews, Meta-analyses, Participatory Research, Rapid Assessments, Key Informant Interviews, RARE/ iRARE, Ethnography, Focus Groups, Online Surveying, Motivational Interviewing, GIS & Spatial Analysis

Technical skills: Microsoft Suite, R, STATA, SPSS, Arc GIS, NVIVO, NLOGIT

Other: German & French language skills

Linkedin: https://www.linkedin.com/in/ccasejohnson/

Relevant Experience

World Health Organization, Geneva, Switzerland
HIV testing services, Technical Officer May 2013-present

- Technical lead on HIV testing services with focus on HIV self-testing, including providing country support and developing policy and technical documents, operational research notes, research protocols, systematic reviews, market landscapes and policy analysis. Currently leading implementation guidance on HIV self-testing and partner notification, as well as updating Consolidated Guidelines on HIV testing services for 2019.
- Development and coordination of the WHO Consolidated Guidelines on HIV testing services and Guidelines on HIV self-testing and partner notification services, as well as roll-out and dissemination
- Lead on data analysis and validation of global figures on HIV testing services with WHO, UNAIDS and UNICEF, as well as quantification of volume of HIV rapid test kits and self-test kits procured by major donors.
- WHO-lead on successful proposal and focal point for the STAR Project with Population Services International and London School of Hygiene and Tropical Medicine for scaling-up HIVST in 6 African countries
- Developed information, policy and evidence hub on HIV self-testing; as well as open source systematic map features through www.hivst.org

US Agency for International Development Namibia, Windhoek, Namibia
HTC Specialist & Country Operational Plan Manager January 2013 - April 2013

- Managed development, coordination, and task completion of USAID Namibia's 2013 Country Operational Plan
- Conducted field research (rapid assessment and qualitative research) with Society for Family Health to identify gaps and provide technical support/ recommendations regarding linkages and referrals key populations. Research and recommendations led to the implementation of the moonlight clinic and case management programme in key regions within Namibia.
- Collaborated with USAID Namibia and Washington and JSI consultants on a rapid assessment of Over-the-Counter (OTC) HIV/AIDS Rapid Test Kits (RTKs) in private pharmacies.
- Collected and synthesised USAID Namibia programme data and key information for national, regional and PEPFAR reports and presentations; and constructed a data analysis and dashboard tool to enable USAID and implementing partners to calculate their impact.

Office of HIV/AIDS, US Agency for International Development, Washington, D.C.
May 2012-December 2012
HIV Testing & Counselling Specialist
Global Health Fellows Program-II

- Provided technical support to USAID/Namibia and implementing partners related to transition planning for standalone VCT sites; and conducted national-level analysis of VCT programmes.
- Developed a multisectoral Namibia-specific sustainable livelihood model for USAID.
- Conducted literature reviews on linkage to care and HIV self-testing, and informed mixed methods study designs for examining barriers to linkage care in Mozambique, and rapid assessment of over-the-counter HIV self-test kits in Namibia.

Grants

- **Enabling Grant Amendment on HIV self-testing—Unitaid**
  Total award US$2.8 million, 2017-2020; supporting scale-up and implementation of HIV self-testing in 27 focal countries
- **Improving effectiveness and efficiency of HIV testing—Bill and Melinda Gates Foundation**
  Total award US$ 2.5 million, 2017-2020; identifying and addressing gaps in HIV testing implementation to improve more cost-effectiveness implementation, guiding research agenda and updating normative guidelines.
- **Formation of WHO guidelines on partner notification services—Bill and Melinda Gates Foundation**
  Total award US$ 88,100, 2015-2017; guidelines on partner notification services
- **Unitaid/PSI Self-Testing Africa (STAR) Project—Unitaid**
  Total award for US$ 23 Million, 2015-2017; implementation research for largest study on HIV self-testing
- **Accelerating the introduction and scale up of HIV Self-Testing—Bill and Melinda Gates Foundation**
  Total award for US$ 907,000, 2015-2017; country support and work to accelerate HIV self-testing scale-up

- **Brocher Foundation, 2016;** symposium on the misdiagnosis of HIV status and special issue with JIAS
  Total award for CHF 30,0000.
- **Wellcome Trust International Engagement Award**
  Total award for £30,000, 2015-2017; develop participatory film project "In Our Hands" on HIV self-testing in Malawi. PI: Nic Desmond, Liz Corbett.

Education

PhD Student; London School of Hygiene and Tropical Medicine, Clinical Research Department, 2020

Certificate in Public Health; Georgia State University 2012

M.A. in Applied Anthropology; Georgia State University 2011

B.A. in International Economics and Modern Language (German); Georgia State University 2008

Awards

Forbes 30 under 30 – Health Care category, January 2016

First place, Best Poster Award – African Society for Laboratory Medicine, December 2014
Are We Delivering the Wrong Results?: Examining Misclassification of HIV Status and False Positive Test Results

Sanford H. Bederman Research Award, 2012

ECO-Action Appreciation Award, 2012

Atlanta Planning & Advisory Board (APAB) Neighbourhood Matters Award, 2012

National Association of Practicing Anthropologists National Student Achievement Award, 2011

Steering Committee Member, PANTHEON Trial, London, UK (2015-present)

Advisory Board Member, EU Joint Action INTEGRATE, Brussels, Belgium (August 2017-present)

Publications

Academic Articles

1. Mwenge L, Sande L, Mangenah C, Ahmed N, Kanema S, d'Elbée M, Sibanda E, Kalua T, Ncube G, **Johnson C**, Hatzold K, Cowan F, Corbett E, Ayles H, Maheswaran H, Terris-Prestholt F. Costs of facility-based HIV testing in Malawi, Zambia and Zimbabwe. PloS ONE. 2017; 12(10): e0185740.

2. **Johnson C**, Dalal S, Taegtmeyer M. A public health approach to addressing and preventing misdiagnosis in the scale-up of HIV rapid testing programmes. JIAS. 2017; 20(Suppl 6): 22190.

3. **Johnson C**, Fonner, V, Tsui, S, Ford N, Sands A, Mahklouf C, Baggaley R. To err is human, to correct is public health: a systematic review of poor quality testing and misdiagnosis of HIV status. JIAS. 2017; (Suppl 6):21755.

4. Rutstein, SE, Ananworanich, J, Fidler, S, **Johnson, C**, Sanders, E, Sued, O, Saez-Cirion, A, Pilcher C, Fraser, C, Cohen, M, Vittoria, M, Doherty, M, Tucker J. Clinical and public health implications of acute and early HIV detection and treatment: A scoping review. JIAS. 2017; 20:21579.

5. Indravudh P, Sibanda E, d'Elbee M, Kumwenda M, Ringwald B, Maringwa G, Simwinga M, Nyirenda L, **Johnson C**, Hatzold K, Terris-Prestholt F, Taegtmeyer M. 'I will choose when to test, where I want to test': investigating young people's preferences for HIV self-testing in Malawi and Zimbabwe. AIDS. 2017; 31:S203-S212.

6. Choko, AT; Kumwenda, MK, **Johnson, C**, Sakala D, Chikalipo, MC, Fielding K, Chikovore J, Desmond N, Corbett, EL. Acceptability of woman-delivered HIV self-testing to the male partner, and additional interventions: a qualitative study of antenatal care participants in Malawi. JIAS. 2017; 20: 21610

7. Dalal, S, **Johnson C**, Fonner V, Kennedy C, Siegfried N, Figueroa C, Baggaley R. Improving HIV test uptake and case finding with assisted partner notification services. AIDS. 2017; 31(13):1867-76.

8. **Johnson C**, Sands A, Urassa W, Baggaley R. Alert, but not alarmed - a response to "Towards more accurate HIV testing in sub-Saharan Africa: a multi-site evaluation of HIV RDTs and risk factors for false positives". JIAS. 2017; 20:1.

9. **Johnson C**, Kennedy C, Fonner V, Siegfried N, Figueroa C, Dalal S, Sands A, Baggaley R. Examining the effects of HIV self-testing compared to standard HIV testing services: a systematic review and meta-analysis. JIAS. 2017, 20:21594.

10. Eaton JW, **Johnson C**, Gregson S. The cost of not re-testing: HIV misdiagnosis in the ART 'test-and-treat' era. CID. 2017; Apr 24.

11. Kennedy C, Yeh, P**, Johnson C**, Baggaley R. Should trained lay providers perform HIV testing? A systematic review to inform World Health Organization guidelines. AIDS Care; 2017 Apr 24:1-7.

12. Flynn, D, **Johnson C**, Sands A, Wong V, Figueroa C, Baggaley R. Can trained lay providers perform HIV testing services? A review of national HIV testing policies. BMC Research Notes; 2017.

13. Witzel C, Weatherburn P, Burns FM, **Johnson C**, Figueroa C, Rodger AJ. Consolidating emerging evidence surrounding HIVST and HIVSS: a rapid systematic mapping protocol. Systematic Reviews. 2017; 6:72.

14. Baggaley R, Dalal S, **Johnson C**, Figueroa C, MacDonald V, Mameletzis, I, Rodolph M, Samuelson J, Verster A. Beyond the 90-90-90: Refocusing HIV prevention as part of the global HIV response. JIAS; 2016.

15. **Johnson C**, Corbett E. HIV self-testing to scale up couples and partner testing. Lancet HIV; 8 Apr 2016.

16. Ishikawa, N, Dalal S, **Johnson C**, Hogan D, Shimbo T, Shaffer N, Pendse R, Ru-Lo, Y, Ghidinelli M, Baggaley R. Should HIV testing for all pregnant women continue? Cost-effectiveness of universal antenatal testing compared to focused approaches across high to very low HIV prevalence settings. JIAS. 2016; 19(1): 21212.

17. Easterbrook P, **Johnson C**, Figueroa C, Baggaley R. HIV and Hepatitis Testing: Global Progress, Challenges, and Future Directions. AIDS Rev. 2016; 18:3-14.

18. Figueroa C, **Johnson C**, Verster A, Baggaley R. Attitudes, values and preferences on HIV self-testing among key populations. AIDS Behav. 2015;Nov;19(11):1949-65.

19. Baggaley R, **Johnson C**, Garcia Calleja JM, Sabin K, Obermeyer C, Taegtmeyer M, Zaba B, El-Hayek C, Singh JA. Routine feedback of test results to participants in clinic- and survey-based surveillance of HIV. Bull of WHO. 2015; 93(5): 352–355.

20. **Johnson C**, Baggaley R, Forsythe S, van Rooyen H, Ford N, Napierala Mavedzenge S, Corbett E, Natarajan P, Taegtmeyer M. Realizing the potential of HIV self-testing: an editorial. AIDS and Behavior. 2014 Jul;18(Suppl 4):S391-5.

21. Wong V., **Johnson C**, Cowan E, Rosenthal M, Peeling R, Miralles M, Sands A, Brown C. HIV self-testing in resource-limited settings: regulatory and policy considerations. AIDS Behavior. 2014; 18(Suppl 4): S415-21.

22. **Johnson C,** Curran K, Napierala Mavedzenge S, D'Orentizo E, Baggaley R. L'autotest de dépistage du VIH pour les travailleurs du sexe et les hommes qui ont des rapports sexuels avec des hommes en Afrique de l'Ouest : défis et perspectives de cette stratégie. Solthis, 2014.

23. **Case[1] C,** Hawthorne TL. Served or unserved? A site suitability analysis of social services in Atlanta, Georgia using Geographic Information Systems. Applied Geography;2013, 38:96-106.

Manuscripts in preparation / under review

1. De Boni RB, Veloso VG, Fernandes NM, Lessa F, Girade R, Lima R, Cruz M, Oliveira J, Muniz S, de Jesus B, Reis T, Lentini N, Miranda R, Bingham T , **Johnson C,** Barbosa A, Grinsztejn B. "E-testing": Implementing an internet-based HIV self-testing strategy for men who have sex with men (MSM) in Brazil.

[1] Case is my maiden name and former last name

2. Figueroa C, **Johnson C**, Ford N, Dalal S, Corbett E, Hatzold K, Baggaley R. Reliability of HIV Rapid Diagnostic Tests for Self-Testing Performed by Self-Testers Compared to Healthcare Workers: A Systematic Review and Meta-Analysis.

3. Phillips A, Cambiano V, Nakagawa, F, Bansi-Matharu L, Wilson D, Jani I, Apollo T, Sculpher M, Hallett T, Kerr C, van Oosterhout J, Eaton J, Estill J, Williams B, Doi N, Cowan F, Keiser O, Ford D, Hatzold K, Barnabas R, Ayles H, Meyer-Rath G, Nelson L, **Johnson C**, Baggaley R, Fakoya A, Jahn A, Revill P. Cost per newly diagnosed person for HIV testing programmes in low income settings in sub-Saharan Africa.

4. d'Elbée M, Indravudh P, Mwenge L, Kumwenda M, Simwinga M, Choko A, Hensen B, Neuman M, Ong J, Sibanda E, **Johnson C**, Hatzold K, Cowan F, Ayles H, Corbett E, Terris-Prestholt F. Preferences for linkage to HIV care services following a reactive self-test: discrete choice experiments in Malawi and Zambia.

Conference Abstracts & Presentations

1. Figueroa C, **Johnson C**, MacDonald V, Verster A, Baggaley R. A review of values and preferences for blood-based versus oral fluid HIV self-tests. ICASA. Abidjan, Cote d'Ivoire; 3-4 Dec 2017.
2. **Johnson C,** Chamie G. Debate: HIV self-testing should be implemented for all adolescents. 9th HIV Pediatrics Conference. Paris, France; 21-22 July 2017.
2. **Johnson C**, Figueroa C, Cambiano V, Phillips A, Sands A, Perez M, Urassa W, Prat I, Meurant R, Corbett E, Terris-Prestholt F, Baggaley R. Clinical utility risk benefit analysis of HIV self-testing. 9th International AIDS Society Conference. Paris, France; 23-26 July 2017.
3. Gotsche C, Simwinga M, Muzumara A, Kapaku K,Sigande L, Neuman M, Taegtmeyer M, Corbett E, **Johnson C**, Schaap A, Mwinga A, Hatzold K, Ayles H. HIV self-testing in Zambia: User ability to follow the manufacturer's instructions for use. 9th International AIDS Society Conference. Paris, France; 23-26 July 2017.
4. Neuman M, Ayles H, Fielding K, Hensen B, Indravudh P, **Johnson C**, Mkandawire P, Otte im Kampe E, Sibanda E, Weiss HA, Cowan FM, Hatzold K, Corbett E. Prevalence of testing and preference for self-testing in Malawi and Zambia: baseline data from the STAR (HIV self-testing in Africa) project. 9th International AIDS Society Conference. Paris, France; 23-26 July 2017.
5. Sande L, Mangenah C, Mwenge L, Maheswaran H, Neuman M, **Johnson C**, Indavudh P, d'Elbée M, Hatzold K, Corbett E, Terris-Prestholt F. A user costs analysis for HIV testing among rural communities in Malawi. 9th International AIDS Society Conference. Paris, France; 23-26 July 2017.
6. Indravudh P, Henson B, OtteimKampe E, Kumwenda M, Simwinga M, Desmond N, **Johnson C**, Hatzold K, Ayles H, Corbett E, Neuman M, UNITAID/PSI Self-Testing Africa (STAR). Masculinity and uptake of HIV testing: validity of the conformity to masculine norms inventory-22 in Malawi and Zambia. 9th International AIDS Society Conference. Paris, France; 23-26 July 2017.

7. Dalal S, **Johnson C**, Fonner V, Kennedy C, Siegfried N, Figueroa C, Baggaley R. Increasing HIV test uptake and case finding through assisted HIV partner notification services: a systematic review and meta-analysis. 9th International AIDS Society Conference. Paris, France; 23-26 July 2017.
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instructions-for-use in Malawi. Conference on Retroviruses and Opportunistic Infections. Seattle, WA, USA; 13-16 February 2017.
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20. Eaton J, **Johnson C**, Gregson S. The cost of not retesting in the ART era. Conference on Retroviruses and Opportunistic Infections. Seattle, WA, USA; 13-16 February 2017.
21. Figueroa C, **Johnson C**, Verster A, Baggaley R. Systematic review on HIV self-testing (HIVST) performance and accuracy of results. International AIDS Conference. Durban, South Africa; 18-22 July 2016.
22. Figueroa C, **Johnson C**, Verster A, Baggaley R. Considerations on accuracy of HIV self-testing: a review. African Society of Laboratory Medicine. Cape Town, South Africa; 3-8 December 2016.
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28. Brostrom M, **Johnson C**, Sands A, Andreeva V, Baggaley R. Test for Triage: a new approach to community-based HIV testing. HIV Research for Prevention. Cape Town, South Africa; 26-31 October 2014.
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30. Curran K, **Johnson C**, Ngure K, Heffron R, Baeten J, OReilly K, Koechlin F, Baggaley R. The potential role of HIV self-testing within pre-exposure prophylaxis implementation. International AIDS Conference. Melbourne, Australia; 20-25 July 2014.
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Reports

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WHO Guidelines

1. Guidelines on HIV Self-Testing and Partner Notification: Supplement to Consolidated Guidelines on HIV Testing Services. Geneva: World Health Organization; 2016.

2. Consolidated Guidelines on HIV Testing Services: 5Cs: Consent, Confidentiality, Counselling, Correct Results and Connection. Geneva: World Health Organization; 2015.

3. Consolidated strategic information guidelines for HIV in the health sector. Geneva: World Health Organization; 2015.

4. Consolidated guidelines on HIV prevention, diagnosis, treatment and care for key populations. Geneva: World Health Organization; 2014.

Other Media

1. In Our Hands: A community-led documentary on HIV self-testing. Malawi-Liverpool Wellcome Trust, World Health Organization; 2017.

Dr Karin Hatzold

Professional Summary

Dr Karin Hatzold is a senior public health manager and physician with over 20 years of work experience, 16 years in the field, mainly in Africa. She has proven track record and strong skills in program design and strategy development, proposal & grant writing, donor management (USAID, UKAID, BMGF, and GFATM), operations research, piloting and scaling up of interventions, project management, including financial management, of large HIV, TB and SRHR service delivery programs in developing countries.

As Deputy Director Programs, COP BMGF Regional VMMC program and COP DFID SRH/HIV project she provides technical assistance and training, supervision and evaluation of clinical service delivery, including social franchising and services integration, development of training guidelines, quality assurance and quality improvement standards, guidelines, tools and job aids for HIV counseling and testing, child HIV counseling, PMTCT, SRHR, VMMC and HIV treatment & care programs.

Dr Hatzold is co-investigator on several operations research studies on male circumcision, TB, HTC and integrated SRH/HIV programming. Dr Hatzold is a global technical expert on VMMC and has contributed to several global, WHO and PSI internal technical guidelines.

A Medical Doctor and Haematologist by training, she has extensive experience in HIV/TB disease management, including ART, HIV prevention and patient counseling, TB DOTS, PMTCT, clinical management of infectious diseases and investigation & management of outbreaks in Africa as well obstetric care and surgery, pediatrics, maternal & child care, family planning, including implant/IUD insertions and removals and female sterilization.

Professional Experience

2012 October – present

Deputy Country Director Programs and Chief of Party DFID SRH/HIV integration program

- Oversee and lead all HIV prevention, care and treatment, SRH and Family Planning, Social Marketing and Communications interventions of PSI Zimbabwe.
- Technical guidance for the development and maintenance of three social franchise networks for the delivery of combination HIV prevention, care and treatment, family planning and SRH services.
- Lead the introduction and scale up of new, innovative HIV and SRH program areas such as: antiretroviral therapy for prevention, increasing efficiency in VMMC service delivery through innovative service delivery models (piloting of task-shifting t nurses, use of diathermy for hemostasis, use of pre-bundled MC kits, efficient use of personnel in VMMC programing, efficient client flow); integration of cervical cancer screening and treatment (VIAC) with HIV prevention services, integration of services for survivors of sexual abuse and rape with HIV services networks.
- Lead several operational research studies: Introduction and scale up of community based HIV self-testing; uptake of couples HIV testing and counseling using innovative performance based financing schemes; Integration of FP with HIV services, including costing; Service delivery mechanisms influencing women to take up cervical cancer screening; Demand creation for increasing uptake of EIMC; Acceptability and feasibility of post-partum contraception at public sector health care facilities.
- Co-Pi on research studies to assess the feasibility, acceptability and costing of adult and infant male circumcision devices; three studies on the PrePex devices and two studies on early infant male circumcision devices.

- Contributing author to WHO document: *"Guideline on the use of devices for adult male circumcision for HIV prevention"*, 2013.
- Key author of adverse events guidelines for surgical adult male circumcision, PSI and COSECSA, funded by CDC, 2013.
- Lead strategic plan development and programatic performance analysis of PSI Zimbabwe.
- Coordinate donor resources and the compliance of the financial systems and controls of USAID, UKAID and BMGF standards.
- Develop and maintain strong external relations, in particular with government, donors, and public and private sector partners.
- Review and coordinate all donor (USAID, DFID, UKAID) reporting both financial as well as programatic.

2011 June – present
Director Gates Male Circumcision Partnership Project

- Provide technical support and overall leadership for Gates MC Partnership Project in Zambia, Zimbabwe, Mozambique and South Africa for VMMC scale up and MC device related research.
- Principle Investigator and technical oversight of adult/adolescent and EIMC device related studies in Zimbabwe, Zambia, South Africa and Mozambique.
- Technical guidance for VMMC program design, strategic framework development, services implementation, quality assurance and external supervision.
- Manage donor relations through frequent exchange with the donor and regular update meetings and teleconference as well as reports.
- Managed the reprogramming of the previous grant agreement into a new project with 10 different objectives and the transition to a new outcome/performance based funding mechanism for VMMC service delivery in Zambia and Zimbabwe.

2011 June –December 2012
Deputy Director Sexual Reproductive Health, HIV and TB, Population Services International, Global

- Developed, managed and strengthened PSI's organisation-wide services quality assurance and quality improvement standards, tools, trainings, audits, and monitoring.
- Implemented departmental strategic plan priorities related to quality assurance & quality improvement for HIV services programs, especially for VMMC.
- Managed the development/updating of PSI-wide VMMC services standards, protocols and guidelines, job aids and other tools.
- Assisted through appropriate leadership and delegation, the implementation and maintenance of PSI's adverse events reporting system for Male Circumcision.
- Assisted with the development and implementation of a PSI-wide quality assurance audit scheduling, tracking and follow up system, including the development of audit checklists and a scoring system for Male Circumcision and other HIV related services.
- Technical support to platforms for the implementation of VMMC services and HIV services integration.

2004 – 2011 June

Senior Director HIV Services, Population Services International/Zimbabwe

- Lead a team of 180 local employees for six services program components: male circumcision, HIV counseling & testing, post-test support services, TB/HIV integration, HIV care, and FP/HIV integration.
- Provided technical support to Zimbabwean Ministry of Health and Child Welfare (MOHCW) and the Zimbabwe Uniformed Forces for the design, initiation and scale up of adult male circumcision services in Zimbabwe; design pilot program for neonatal MC; technical guidance in the development of the Zimbabwe National MC Strategic Framework, 2010-2015 and MC cost-effectiveness study; develop MC M&E system, indicators and tools, MC quality assurance and improvement system, including adverse events guidelines and checklists, develop training curricula, tools and job-aids for national MC program, provide technical assistance in the development of the supply chain management system for MC commodities.
- Designed and managed FP/HIV integration, private-public partnership project that includes implants, IUDs, injectables, POCs/COCs and emergency contraceptives; secure funding through the Dutch Government for the project (2.5 Million); developed quality control and quality improvement system for national implant insertion program; establish quality assurance framework, guidelines and tools for providers of long-acting reversible FP methods, including adverse events guides and report forms; developed counseling cards and flipcharts as job aids for FP counseling; lead development of curricula and presentations for training of FP providers; provided technical support for mass media and interpersonal communication campaigns promoting dual protection.
- Expanded *New Start* counseling and testing (CT) and *New Life* post-test support services (PTSS) national franchise networks and successfully integrate TB screening, including smear microscopy, CD4 cell count point care laboratory services and family planning with CT and PTSS services; established provider referral networks, developed mobile outreach and workplace programs for both CT and PTSS; design, implement and monitor pilot home-based CT program.
- Technical advisory role to Ministry of Health in CT service delivery**,** lead the development of the Zimbabwe Strategic Framework for CT and the implementation plan for Provider Initiated Testing and Counseling (PITC); developed training guidelines and M&E tools and conduct training, supervision and evaluation of national PITC program; lead the development of the National Antiretroviral Therapy Adherence Counseling Guidelines.
- Monitored budget expenditures from 5 grants exceeding USD 75 million, ensuring appropriate use of funds.
- Co- author of successful proposal submissions for PSI Zimbabwe:
    - DFID Integrated SRH/HIV program ($ 41 Million, 3 years), 2012
    - TBReach Wave two, ($900 000, 1 year), 2011
    - Bill and Melinda Gates Foundation, Male Circumcision program Uniformed Services ($11 Million, 3 years), 2010
    - USAID SPSS project, ($ 100 Million, 5 years), 2010
    - Dutch COF FP/HIV project ($ 1.5 Million, 4 years), 2011
    - Dutch SALIN FP/HIV project, ($2 Million, 2 years), 2009
    - Global Fund for AIDS, TB and Malaria proposals, HIV component: Round 5 ($60 Million), 2005; Round 8 (USD 300 Million), 2008
    - DFID, Behavior Change Communications Program for HIV Prevention, (£21 Million, 5 years), 2006

    - USAID, Zimbabwe HIV and AIDS Partnership Project ($30 Million, 5 years), 2005
- Provided technical guidance in program design and implementation of other PSI Zimbabwe programs, such as generic and branded behavior change communications and services communications.
- Documented and disseminated lessons learned from PSI/Zimbabwe HIV programs through abstracts and presentations at international HIV/AIDS conferences.
- Co-Principal Investigator for operational research studies on male circumcision:
    - Acceptability and feasibility of neonatal MC in Zimbabwe, conducted by ZAPP, University of Zimbabwe
    - Acceptability and feasibility of adult MC in Zimbabwe, conducted by ZAPP, University of Zimbabwe
    - Assessment of the effect of MC roll out on existing health services, conducted by ZAPP, University of Zimbabwe
    - Systematic Monitoring of the Male Circumcision Scale-up, John Hopkins University, ZAPP, University of Zimbabwe
- Represented PSI/Zimbabwe to external partners including donors, MOHCW, partner agencies and the media.
- Provided technical assistance to PSI platforms in other countries in terms of public health and HIV and AIDS programming.
    - Assessment of PSI/SFH's CT program in Zambia (2009).
    - Technical assistance in development of referral systems for HIV prevention, care, treatment and support, PSI Malawi (2010).

Professional/technical membership_____

- Core member of the writing team for Zimbabwe's Global Fund Rounds 4, 5, 8 and 10, HIV/AIDS proposals, 2004 -2010
- Member of the Global Fund CCM Subcommittee for HIV and AIDS and TB
- Member of the National Partnership Forum for HIV Testing and Counseling, the National PMTCT Partnership Forum, the national TB Technical Advisory team and the national STI/HIV Technical Advisory team.
- Chair and Member of the Male Circumcision Technical Working groups and MC Steering Committee.
- National trainer for Male Circumcision program.
- Member of Medical and Dental Practitioners' Council of Zimbabwe
- Member of the WHO Guideline Development Group for the Guideline on the use of devices for adult male circumcision for HIV prevention.

2002 – 2004
Public Health and HIV/AIDS Advisor, Médecins du Monde France

- Senior Public Health Advisor in the design, planning, implementation, monitoring and evaluation of HIV and AIDS projects in Africa, Asia and Latin America.
- Designed and developed the following programs:
    - Comprehensive integrated HIV/AIDS prevention and care program in Chipinge District, Zimbabwe
    - Prevention of mother to child transmission of HIV program in Mekele, Ethiopia,

- Prevention of mother to child transmission of HIV program in Rakai District, Uganda
- Comprehensive care package, including ART program for staff members at Kagera Regional Hospital in Bukoba, Tanzania
- Family centered comprehensive HIV/AIDS prevention and care program Bukoba, Tanzania, including ART program

- Provided technical support in the evaluation of several HIV and AIDS programs in Asia, Latin America and Africa for Médecins du Monde.
- Contributed to major decision-making processes concerning operational and implementation strategies.
- Developed training program and conducted training of program staff in health program planning and logical framework development.
- Lead author of several successful proposal submissions to fund HIV and AIDS programs (EC, ECCO, Ministry of Foreign Affairs (MAE), and HIVOS).

2001-2002 Master in Public Health, London School of Hygiene and Tropical Medicine

1996 - 2001
District Medical Officer and Government Medical Officer, Chipinge and Chiredzi Districts of Zimbabwe, MOHCW Zimbabwe, GTZ

- Supervised all clinical activities at primary health care centers.
- Medical and surgical treatment of patients, including maternal and child health.
- Surgical obstetric care: conducted caesarean sections, repaired uterine ruptures, operated ectopic pregnancies, evacuation of uterus after spontaneous abortions, clinical and surgical management of post-partum hemorrhage, performed insertions of IUDs and implants as well as female sterilizations and trained junior doctors in obstetric care, FP and surgery.
- Conducted minor operations: Incision and drainage of abscesses, wound debridement, minor amputations, skin grafts, adult male circumcisions and other minor operations.
- Training of health care workers at all levels in medical, obstetric and surgical care.
- Provided clinical management of HIV/AIDS patients and management of tropical diseases.
- Coordinated HIV awareness and counseling programs in the districts.
- Coordinated various health programs including the Expanded Program of Immunizations (EPI), and control programs for Malaria and Schistosomiasis.
- Technical support in the investigation, management and supervision of disease outbreaks such as cholera.
- Participated in setting public health priorities at the district and provincial level.
- Conducted supervision and management of the Child Malnutrition Program.
- Physician in charge of the departments of Pediatrics, Obstetrics, Medicine, Outpatients
- Coordinated the Directly Observed Treatment (DOTS) program for Tuberculosis.
- Provided psychological care, forensic examination and prophylactic treatment (PEP and emergency contraception) for child sexual abuse and rape victims.

1994 - 1996
Medical Doctor, Department of Hematology, University Hospital St. Antoine in Paris, France

- Provided diagnosis and medical care for patients with hematological diseases; conducted follow up of patients on chemotherapy, radiotherapy and during bone marrow transplantation.

1993 - 1994

Medical Doctor, Department of Oncology, University Hospital Boucicaut, Paris/France

- Provided diagnosis and medical care for patients with malignant diseases; conducted follow up of patients on chemotherapy and radiotherapy.

1992 - 1993

Medical Doctor, Department of Infectious Diseases and Tropical Medicine, University Hospital Bichat, Paris/France

- Provided medical care for patients with infectious diseases including HIV and AIDS.

Education

MPH, London School of Hygiene and Tropical Medicine, focus on HIV and AIDS, Sexually Transmitted Infections, Reproductive Health, Epidemiology, 2002

Doctor in Medicine, University of Mainz, Germany, and 2 year dissertation: Influence of circadian and pulsatile secretion of Thyroid Stimulating Hormone in therapy by Iode and Levothyroxin on endemic goiter, 1992.
MD, University of Mainz, Germany, 1992

Papers, Publications, Presentations

Jessica E. Price1, Lyson Phiri, Drosin Mulenga, Paul C. Hewett, Stephanie M. Topp, Nicholas Shiliya, Karin Hatzold: Behavior Change Pathways to Voluntary Medical Male Circumcision: Narrative Interviews with Circumcision Clients in Zambia. PLoS ONE 9 (11): e111602. doi:10.1371/journal.pone.0111602

Njeuhmeli, Hatzold, Gold, Mahler, Kripke, Seifert-Ahanda, Castor, Mavhu, Mugurungi, Ncube, Koshuma, Sgaier, Conly, Kasedde: Lessons Learned From Scale-Up of Voluntary Medical Male Circumcision Focusing on Adolescents: Benefits, Challenges, and Potential Opportunities for Linkages With Adolescent HIV, Sexual, and Reproductive Health Services: J Acquir Immune Defic Syndr Volume 66, Supplement 2, July 1, 2014

Hatzold K, Mavhu W, Jasi P, Chatora K, Cowan FM, et al. (2014) Barriers and Motivators to Voluntary Medical Male Circumcision Uptake among Different
Age Groups of Men in Zimbabwe: Results from a Mixed Methods Study. PLoS ONE 9(5): e85051. doi:10.1371/journal.pone.0085051

Ashengo TA, Hatzold K, Mahler H, Rock A, Kanagat N, et al. (2014) Voluntary Medical Male Circumcision (VMMC) in Tanzania and Zimbabwe: Service Delivery Intensity and Modality and Their Influence on the Age of Clients. PLoS ONE 9(5): e83642. doi:10.1371/journal.pone.0083642

Njeuhmeli E, Kripke K, Hatzold K, Reed J, Edgil D, et al. (2014) Cost Analysis of Integrating the PrePex Medical Device into a Voluntary Medical Male Circumcision Program in Zimbabwe. PLoS ONE 9(5): e82533. doi:10.1371/journal.pone.0082533

Jennings L, Bertrand J, Rech D, Harvey SA, Hatzold K, et al. (2013) Quality of Voluntary Medical Male Circumcision Services during Scale-Up: A Comparative Process Evaluation in Kenya, South Africa, Tanzania and Zimbabwe. PLoS ONE 8(12): e79524. doi:10.1371/journal.pone.0079524

Mavhu W, Frade S, Yongho A-M, Farrell M, Hatzold K, et al. (2014) Provider Attitudes toward the Voluntary Medical Male Circumcision Scale-Up in Kenya, South Africa, Tanzania and Zimbabwe. PLoS ONE 9(5): e82911. doi:10.1371/journal.pone.0082911

Tsitsi Bandason, Lisa F. Langhaug, Memory Makamba, Sue Laver, Karin Hatzold, Stephen Mahere, Shungu Munyati, Stanley Mungofa, Elizabeth L. Corbett & Rashida A. Ferrand: Burden of HIV among primary school children and feasibility of primary school-linked HIV testing in Harare, Zimbabwe: A mixed methods study; AIDS Care: Psychological and Socio-medical Aspects of AIDS/HIV, DOI:10.1080/09540121.2013.780120

Jason Bailey Reed, Emmanuel Njeuhmeli, Anne Goldzier Thomas, Melanie C. Bacon, Robert Bailey, Peter Cherutich, Kelly Curran, Kim Dickson, Tim Farley, Catherine Hankins, Karin Hatzold, Renee Ridzon, Caroline Ryan, Naomi Bock: Voluntary Medical Male Circumcision: An HIV Prevention Priority for PEPFAR, J Acquir Immune Defic Syndr 2012;60:S88–S95

Webster Mavhu, Karin Hatzold, Susan M. Laver, Judith Sherman, Brenda R. Tengende, Collin, Mangenah, Lisa F. Langhaug, Graham Hart, Frances M. Cowan: Acceptability of Early Infant Male Circumcision as an HIV Prevention Intervention in Zimbabwe: A Qualitative Perspective, PLoS ONE (impact factor: 4.09). 01/2012; 7(2):e32475. DOI:10.1371/journal.pone.0032475 pp.e32475

Webster Mavhu, Raluca Buzdugan, Lisa F. Langhaug, Karin Hatzold, Clemens Benedikt, Judith Sherman, Susan M. Laver, Oscar Mundida, Godfrey Woelk and Frances M. Cowan: Prevalence and factors associated with knowledge of and willingness for male circumcision in rural Zimbabwe, Tropical Medicine & International Health (impact factor: 2.8). 02/2011; 16(5):589-97. DOI:10.1111/j.1365-3156.2011.02744.x pp.589-97

Mavhu W, Hatzold K, Samkange CA, Rech D, Bertrand JT: Systematic Monitoring of the Voluntary Medical Male Circumcision Scale-up in Eastern and Southern Africa: Zimbabwe, submitted for publication.

Euphemia L. Sibanda; Karin Hatzold; Owen Mugurungi; Getrude Ncube, Beatrice Dupwa; Pester Siraha Lydia Madyira; Alexio Mangwiro; Gaurav Bhattacharya; Frances M. Cowan: An assessment of the Zimbabwe Ministry of Health and Child Welfare Provider Initiated HIV Testing and Counselling Programme. BMC Health Services Research 2012, 12:131 doi:10.1186/1472-6963-12-131

Sekesai Mtapuri-Zinyowera, Memory Chideme, Douglas Mangwanya, Owen Mugurungi, Stephano Gudukeya, Karin Hatzold, Alexio Mangwiro, Gaurav Bhattacharya, Jonathan Lehe, Trevor Peter. Evaluation of the PIMA Point-of-Care CD4 Analyzer in VCT Clinics in Zimbabwe, J. Acquir. Immun. Defic. Synd. 2010.

Models to increase volumes and efficiency (MOVE) in Zimbabwe's male circumcision program. Oral poster presentation, International AIDS Conference Vienna, Austria, 2010.

Integration of male circumcision (MC) with existing HIV prevention programs in Zimbabwe using HTC as entry point for HIV negative men to undergo MC. Presentation at International AIDS Conference Vienna, Austria, 2010.

Dual Protection to meet family planning and HIV prevention needs in Zimbabwe. Presentation at International AIDS Conference Vienna, Austria, 2010.

Clients' knowledge, attitudes and perceptions of provider-initiated testing and counseling services at public sector health facilities in Zimbabwe. Presentation at International AIDS Conference Vienna, Austria, 2010.

Behaviour change counseling of suspects with acute HIV infection identified by P24 antigen test offered at VCT centers in Zimbabwe. Presentation at International AIDS Conference Vienna, Austria, 2010.

Impact of interpersonal communication and promotion campaigns on uptake of HIV testing and counseling services by heterosexual couples in rural areas in Zimbabwe. Oral presentation at Implementers Meeting, Windhoek Namibia, 2009.

Partnerships And Collaboration to Better Address the Needs of Returned Migrants at Plumtree Border Post in Zimbabwe. Oral presentation at Implementers Meeting, Windhoek Namibia, 2009.

Hatzold, Karin; Czerwinski, Lukasz, Czerwinski; Joseph, Dvora; Rupanga, Mathew; Mushayi, Wellington. A Comparison of Four Client-Initiated HIV Testing and Counseling Service Delivery Models in Zimbabwe. (Working Paper No. 69). Washington, DC: Population Services International, 2008.

Tuberculosis and HIV program integration: is it really happening? Knowledge of HIV status among patients visiting a tuberculosis referral clinic in Harare, Zimbabwe. Presentation at International AIDS conference, Mexico City, 2008.

Integration of provider-initiated testing and counseling (PITC) as part of routine patient care in health facilities: results from a public sector district hospital pilot, Zimbabwe, March–October. Presentation at International AIDS Conference, Mexico City, 2008.

Impact of social marketing mass media campaigns on uptake of HIV testing and counseling by couples in heterosexual relationships in Zimbabwe. Presentation at International AIDS Conference, Mexico City, 2008.

Cost-effectiveness of HIV testing and counseling (T&C) services in Zimbabwe: a comparison of four client-initiated HIV T&C service delivery models, 2004–2006. Presentation at International AIDS Conference, Mexico City, 2008.
Impact of Voluntary Counseling and Testing Franchising in Zambia, Namibia and Zimbabwe, Oral presentation, Alpha Conference, Washington DC, 2007.

Adherence counseling promotes high levels of HAART adherence and other positive behavior changes in Zimbabwe's national treatment program. Poster presentation, International AIDS Conference, Toronto, Canada, 2006.

Increasing access to care and treatment for people living with HIV/AIDS (PLWHA) through counseling and testing for HIV. Poster presentation, PEPFAR conference Durban, South Africa, 2006.

Adherence counseling involving PLHAs promotes high levels of HAART adherence and other positive behavior changes in Zimbabwe's national treatment program. Oral presentation, PEPFAR conference Durban, South Africa, 2006.

HIV Testing and Counseling contributes to tuberculosis case finding and tuberculosis control in Zimbabwe. Oral presentation, PEPFAR conference Durban, South Africa, 2006.

Increased HIV prevalence among HIV testing and counseling clients due to perceived availability of treatment in Zimbabwe, Oral presentation, PEPFAR conference Durban, South Africa, 2006.

Attempts at positive selection of “normal” (Philadelphia Chromosome negative) stem cells in patients with chronic myelocytic leukemia, Report on 3 patients: Bone Marrow Transplantation 1994: Vol.14, Supplement 3, page S 79

Influence of circadian and pulsatile secretion of Thyroid Stimulating Hormone in therapy by Iode and Levothyroxin on endemic goiter, 1992, Acta Endocrinologica.

Languages_____

German: Native
English: Fluent
French: Fluent
Spanish: Elementary

References available upon request

Elizabeth Lucy Corbett

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and
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E-mail: liz.corbett@lshtm.ac.uk or lizcorbett04@gmail.com

Qualifications

University of Cambridge: 1st Class	BA (Hons)	06/85	Natural Sciences
University of Cambridge	MBBChir	07/89	Medicine
Royal College of Physicians	Membership	07/1992	Internal Medicine
Royal College of Physicians, Diploma: 1st Place	DTM&H	07/1996	Tropical Medicine
University of London	PhD	01/00	Epidemiology
European Clinical Specialist Register	Certificate	02/01	Clinical Specialist (ID)
Royal College of Physicians	Fellowship	07/10	Medicine

Positions and Employment

1989-1996	Specialist Medical & Infectious Diseases training: *Junior House Officer*: Royal Free Hospital; Stevenage Hospital, Herts. *Senior House Officer* (London): Hammersmith Hospital; Royal Brompton National Heart and Lung Hospital; Harefield Hospital, Middlesex; Whittington Hospital. *Specialist Registrar*: Hospital for Tropical Diseases; HIV/AIDS Inpatient Unit, Middlesex Hospital: Respiratory Medicine, King George Hospital, Essex
1996-1999	Research Fellow, LSHTM
1999-2000	Specialist Registrar, Infectious Diseases Hammersmith Hospital, London
2000-2001	Lecturer, Clinical Research Unit, LSHTM, London
2001-2006	Senior Lecturer, Clinical Research Unit, LSHTM, London
2006-2012	Reader in Infectious & Tropical Diseases, Dept Clinical Research, LSHTM, London
2012-	Professor in Tropical Epidemiology, Dept Clinical Research, LSHTM, London

Personal Fellowships and Honorary Clinical Attachments

1996-1999	Wellcome Trust Training Fellowship in Clinical Tropical Medicine, Wellcome Trust
2000-2005	Wellcome Trust Career Development Fellowship in Clinical Tropical Medicine
2001-2007	Trust Specialist, Hospital for Tropical Diseases, University College Hospitals Trust
2007-	Honorary Consultant, Hospital for Trop Dis, University College Hospitals Trust, London
2005-2010	Wellcome Trust Career Post Fellowship in Clinical Tropical Medicine
2009-	Honorary Professor, Department of Microbiology, College of Medicine, Malawi
2010-2016	Wellcome Trust Senior Fellowship Renewal in Clinical Sciences
2016-2021 `	Wellcome Trust Senior Fellowship Renewal in Clinical Sciences

Membership of Professional Societies and Associations

Fellow of the Royal College of Physicians, London
Fellow of the Royal Society for Tropical Medicine
Member of the International Union against Tuberculosis and Lung Disease
Member of the International AIDS Society
Registered with General Medical Council UK (3322417) and Medical Council of Malawi (MP/1571)

Membership of Advisory Committees

2001 to 2010	Membership of 5 Different TB and HIV Department Working Groups, WHO
2009 to 2015	Member of Strategic & Technical Advisory Group. Global TB Department, WHO
2010 to 2015	TB Research Task Force Member. Global TB Department, WHO
2011 to 2012	Active Case Finding Expert Working Group. Global TB Department, WHO
2012 to 2013	Technical Advisory Group: Field Use of HIV Rapid Tests (PATH / BM Gates Foundation)
2014 to 2016	Latent TB Infection Working Group. Global TB Department, WHO
2015 -	WHO Global Task Force on TB Impact Measurement
2016 -	WHO HIV Testing Services Working Group. HIV Department, WHO
2017	BMGF Consultation: Reaching PLHIV via HIV self-testing. Washington DC, USA
2017 -	Member of TB Modelling and Analysis Consortium (TB-MAC) Advisory Group
2017 -	Chair of Scientific Advisory Board, South African Center for Mathematical Analysis

Academic Awards

1985	Dr Ethel Williams Prize for Natural Sciences, University of Cambridge
1989	Merit in Paediatrics and Surgery, Royal Free School of Medicine
2001	Woodruff Medal - London School of Hygiene & Tropical Medicine
2003	Annual Scientific Prize - International Union Against Tuberculosis and Lung Disease
2004	Chalmers Medal - Royal Society of Tropical Medicine and Hygiene
2007	Wellcome Trust Clinical Excellence Awards for Overseas-Based Clinicians (ongoing)
2010	Elected as a Fellow to the Royal College of Physicians, London, UK

Research Support:

Current

£ 24.9 million Wellcome Trust. MLW MOP Core Grant Renewal (206545/Z/17/Z).
2017-22
Principal Applicant Prof Stephen Gordon. My role: co-applicant & programme lead. Time spent 10%

€ 2,999,644 EDCTP RIA2016MC-1623 Lead Applicant: Dr Norbert Heindrich
2017-22

University of Munich, Germany "Rapid and accurate diagnosis of paediatric TB (RaPaed)" Paediatric TB consortium recruiting 800 patients with suspected TB from 4 African countries including Malawi. My Role: Coapplicant with Dr Marriott Nliwasa for Blantyre site.

£ 1,077,349 Wellcome Trust Clinical Research Career Development Fellowship
2017-22
(206575/Z/17/Z) to Dr Peter MacPherson. "A pragmatic randomised study to optimise screening, prevention and care for tuberculosis in Malawi (PROSPeCT Study)". My Role: Mentor and Site Sponsor.

€ 14,999,952 EDCTP TRIA2015-1102 Lead Applicant: Prof Martin Boeree,
2016-21
Stichting Katholieke, Universiteit, Netherlands. "PanACEA, a drug development programme to shorten and simplify treatment of tuberculosis". My Role: Coapplicant with Dr Marriott Nliwasa for Blantyre site.

US$ 48.9 million UNITAID to Population Services International (Phase 2)
2017-20
US$ 23.7 million UNITAID to Population Services International (Phase 1)
2015-17
Two-tier demonstration and evaluation of accuracy and linkage in three countries (Malawi, Zambia and Zimbabwe) in Phase 1 and six countries (addition of in Phase 2, of South Africa, Seaziland and Lesotho) Project Director: Karin Hatzold of PSI. Research Consortium (20% of budget): LSHTM, LSTM, UCL, WHO.
My Role: Research Director and Instigator of Consortium and Proposal. Time spent 20%

US$ 669,596 Helse Nord RHF Award (24 months) to College of Medicine
2017-18
Building capacity in TB research, diagnostics and epidemiology within College of Medicine, Malawi.
My Role: PI with Collaborative TB Research Lab Steering Committee and Dr Chisomo Msefula.

£ 3.95 million Wellcome Trust Senior Fellowship Renewal (GR200901/Z/16/Z).
2016-21
'Sustainable Community Action for Lung hEalth (SCALE): a cluster randomised trial in Blantyre, Malawi'. Community-wide TB case-finding linked to participatory community groups promoting HIV self-testing and prevention of HIV-related TB in Blantyre, Malawi. My Role: Principal Applicant

£ 281,053 MRC Skills Development Fellowship to Nicky McCreesh, LSHTM
2016-19
Mathematical modelling and spatial data analysis to inform TB care and control strategies in high TB incidence settings." My role: Co-investigator. I suggested the topic, linked Nicky with Prof Peter Diggle, and provide data.

£ 235,231 Wellcome Trust Fellowship (G105828/Z/14/Z) to Augustine Choko, MLW.
2016-19
"Partner-provided HIV self-testing and linkage (PASTAL) in antenatal clinics: methodology and delivery of an adaptive cluster-randomised trial in Blantyre, Malawi." My role: I suggested the topic, linked Augustine with Katherine Fielding (LSHTM) and Prof Nigel Stallard (Warwick). I am co-supervisor.

£ 2.0 million MRC/DfID/Wellcome Trust Global Health Trials to Steve Lawn, LSHTM
2015-18
3 year grant "Rapid Urine-Based Screening for Tuberculosis to Reduce AIDS-Related Mortality in Hospitalized Patients in Africa (STAMP) Trial". Time spent 5%.
My role: Supervisor to Trial Coordinator (based in Blantyre) and MLW data hub

NOK 36.4 million GLOBVAC Researcher project to Prof Jon Odland, University of Tromso.
2014-19
5 year grant "Treatment of Chronic Lung Disease in HIV-infected Children in Africa. A multisite controlled trial of weekly azithromycin treatment." ES516097. My role: Senior Scientist (LSHTM CI Rashida Ferrand)

Research Support: Completed since 2015

Wellcome Trust Senior Fellowship Renewal (G091769/Z/10/C)
2015-16
"Community-led sustainable lung health (CL-SHL): a pilot study in Blantyre, Malawi". My role: PI

Helse Nord RHF Award (36 months) to College of Medicine. Co-PI
2013-16
Building capacity in TB research, diagnostics and epidemiology within College of Medicine, Malawi.

EDCTP Strategic Primer Grant to Prof Stephen Gillespie, St Andrews University.
2012-15
2 year proposal "PanACEA Biomarkers Expansion programme: PANBIOME". My role: collaborator.

Wellcome Trust Biomedical Ethics Research Fellowship (WT099051) to Nic Desmond
2012-15
"The social impact of HIV self-testing." My role: collaborator and PI of host project.

Wellcome Trust Training Fellowship to Dr Hendramoorthy Maheswaran, Warwick
2012-15
(WT20304). "The affordability of home-based HIV testing and counselling during scale up of ART"

NIH R01 (AI093316-01) to Prof Richard Chaisson, Johns Hopkins University
2011-17
"Impact of a New Molecular TB Test on TB/HIV Outcomes". My role: Local PI

Wellcome Trust Senior Fellowship Renewal (091769/Z/10/C).
2011-17
Community-wide TB case-finding linked to a nested cluster-randomised trial of of HIV-testing. My role: PI

Invited Speaker

I have been an invited speaker at 25 conferences and workshops starting with an invited talk at the 8th Conference on Retroviruses and Opportunistic Infections (CROI 2001), including a Plenary at the

2009 CROI, and invited talks at International AIDS Society Meetings, World Conference on Lung Health, and Keystone Symposia.

Scientific Network and Meeting Organisation

I have co-organised 5 Scientific Symposia at International Conferences:-

- World AIDS Conference/International AIDS Society
  - "HIV Self-Testing: Evidence for Action. Key Findings from HIV Self-Testing Africa (STAR) Project" 2017
  - "Moving Self-Testing from Theory to Reality for Africa" 2016

- World Conference on Lung Health
  - "Masculinity and Access to TB care Services: The growing gender gap in TB" 2016
  - "Impact evaluation of new TB diagnostics", 2012
  - "Active case-finding for undiagnosed TB in high burden communities", 2011

In Malawi, I initiated TB Research Networking Meetings, run from 2010 onwards by my Research Group in College of Medicine, Malawi. These have now been formalised as the Malawi National TB Research Network, run jointly by the National TB Programme and College of Medicine.

Teaching and training

With colleagues in MLW and the College of Medicine, I developed materials for and organized three regional Postgraduate Research Methods Courses (each 3 weeks: Intensive, Intermediate and Advanced) that have now been institutionalised and are delivered annually by the Research Support Center of College of Medicine. I am currently developing a Clinical Trials Short Course series.

I am sponsor/mentor to 5 postdoctoral researchers with independent Fellowships, including 2 Clinicians (MacPherson and Ferrand), 2 Mathematicians (Dodd, McCreesh) and 1 social scientist (Chokovore). I supervised/co-supervised 6 PhD students to completion.

Current PhD Students

1. Dr Titus Divala: Registered for a PhD at LSHTM, Sept 2017. UK co-supervisor Prof Katherine Fielding
2. Cheryl Johnson: Part time PhD in LSHTM, Jan 2017. UK co-supervisor Prof Terris-Prestholt
3. Dr Jamilah Meghji: Registered for a PhD in Liverpool STMed Sept 2015. UK supervisor Prof Bertie Squire
4. Augustine Choko: Registered for a PhD in LSHTM April 2015. UK co-supervisor Prof Katherine Fielding.
5. Katherine Horton: Registered for part-time PhD in LSHTM, Oct 2013. Co-supervisor Prof Richard White.
6. Dr Marriott Nliwisa: Registered for part-time PhD in LSHTM, Sept 2014.
7. Dr Thandie Mwalukomo: Registered for part-time PhD in LSHTM, Jan 2011 UK. Co- supervisors Profs Rashida Ferrand and Emily Webb. Interruption of studies 2014 and 2015 (maternity leave).

Scientific Citizenship and Public Engagement

July 2015 Media coverage of Brocher Foundation Symposium "The legal, ethical, gender, human rights and public health implications of HIV self-testing (HIVST)". Organisers: Johnson (LSHTM/WHO), Corbett (LSHTM) Baggaley (WHO), Shanks (MSF), Taegtmeyer (LSTM).

May 2017 Co-organiser "HIV Self-Testing: views of Civil Society". 11th INTEREST Conference, Lilongwe, Malawi. Including short public engagement film, Village Heads from Malawi and Zimbabwe, Project Implementers, and Community Workers from UNITAID STAR Project: Delegates from Ministries of Health Malawi, Zimbabwe, and Civil Society Representatives from Malawi, Kenya, Zimbabwe, Zambia, Swaziland, Nigeria, Uganda, Cameroon, Senegal and South Africa.

July 2017 Media coverage of a 12 minute audience with HRH Prince Harry at LSHTM where my PhD student, Augustine Choko demonstrated self-testing and we both presented a poster each.

Aug 2017 Short film "In our hands" made by community members in HIV self-testing villages through Wellcome Trust International Engagement award funding. PIs: Dr Nic Desmond and Liz Corbett. To be screened in Malawi, UK and Geneva on World AIDS Day.

Recent articles (from 126 peer reviewed publications)

1. Maheswaran H, Petrou S, MacPherson P, Kumwenda F, Lalloo DG, **Corbett EL**, Clarke A. Economic costs and health-related quality of life outcomes of HIV treatment following self- and facility-based HIV testing in a cluster randomised trial. J Acquir Immune Defic Syndr. 2017 Mar 21.
2. Gupta-Wright A, Fielding KL, van Oosterhout JJ, Wilson DK, **Corbett EL**, Flach C, Reddy KP, Walensky RP, Peters JA, Alufandika-Moyo M, Lawn SD. Rapid urine-based screening for tuberculosis to reduce AIDS-related mortality in hospitalized patients in Africa (the STAMP trial): study protocol for a randomised controlled trial. *BMC Infect Dis*. 2016 Sep 22;16(1):501.
3. Horton K, MacPherson P, Houben R, White R, **Corbett EL**. Gender differences in tuberculosis burden and notifications: a systematic review and meta-analysis of low and middle-income countries. *PLoS Med 13(9): e1002119. doi:10.1371/journal.pmed.1002119*
4. Benjamin LA, Bryer A, Lucas S, Stanley A, Allain TJ, Joekes E, Emsley H, Turnbull I, Downey C, Toh C-H, Brown K, Brown D, Ison C, Smith C, **Corbett EL**, Nath A, Heyderman RS. Connor MD, Solomon T. Arterial ischemic stroke in HIV. Defining and classifying etiology for research studies. *Neurol Neuroimmunol Neuroinflamm* 2016;3:e254; doi: 10.1212/NXI.0000000000000254
5. Benjamin LA, **Corbett EL**, Connor MD, Mzinganjira H, Kampondeni S, Choko A, Hopkins M, Emsley HC, Bryer A, Faragher B, Heyderman RS, Allain TJ, Solomon T. HIV, antiretroviral treatment, hypertension, and stroke in Malawian adults: A case-control study. *Neurology*. 2016;86:324-33.
6. McCreesh N, Looker C, Dodd PJ, Plumb ID, Shanaube K, Muyoyeta M, Godfrey-Faussett P, **Corbett EL**, Ayles H, White RG. Comparison of indoor contact time data in Zambia and Western Cape, South Africa suggests targeting of interventions to reduce *Mycobacterium tuberculosis* transmission should be informed by local data. *BMC Infect Dis*. 2016;16:71. doi: 10.1186/s12879-016-1406-5
7. Maheswaran H, Petrou S, MacPherson P, Choko AT, Kumwenda F, Lalloo D, Clarke A, **Corbett EL**. The Economic and Quality of Life Impact of HIV Self-Testing versus Facility-based HIV Testing and Counselling in Blantyre, Malawi. *BMC Medicine* 2016;14:34. doi: 10.1186/s12916-016-0577-7.
8. Nliwasa M, MacPherson P, Mukaka M, Choko AT, Mdolo A, Mwapasa M, Kaswaswa K, Kumwenda M, Msefula C, Chipungu G, Mwandumba HC, **Corbett EL**. High Mortality and Prevalence of Undiagnosed HIV and Tuberculosis in Adults with Chronic Cough in Malawi: a Prospective Cohort Study. *Int J Tuberc Lung Dis* 2016: 20(2):202–21

9. Dodd PJ, Looker C, Plumb ID, Bond V, Schaap A, Shanaube K, Muyoyeta M, Vynnycky E, Godfrey-Faussett P, **Corbett EL**, Beyers N, Ayles H, White RG. Age- and sex-specific social contact patterns and incidence of Mycobacterium tuberculosis infection. *Am J Epi* 2016; 183:156-66. PMID- 26646292
10. Sambakunsi R, Kumwenda M, Choko A, **Corbett EL**, Desmond N 'Whose failure counts?' A critical reflection on definitions of failure for community health volunteers providing HIV self-testing in a community based HIV/TB intervention study in urban Malawi. *Anthropol Med.* 2015;22(3):234-49.
11. Choko AT, MacPherson P, Webb EL, Ball H, Sambakunsi R, Mdolo A, Makombe SD, Desmond N, Hayes R, Maheswaran H, **Corbett EL**. Uptake, accuracy, safety and linkage into care over two years of promoting annual self-testing for HIV in Blantyre, Malawi: a community-based prospective study. *PLoS Med* 2015;12(9):e100187
12. Mwalukomo T, Rylance SJ, Webb EL, Anderson S, O'Hare B, van Oosterhout JJ, Ferrand RA, **Corbett EL**, Rylance J. Clinical characteristics and lung function in older children vertically infected with HIV in Malawi. *Paed J Infect Dis* 2016 Jun;5(2):161-9. doi: 10.1093/jpids/piv045. PMID: 26407277
13. Zwerling AA, Sahu M, Ngwira LG, Khundi M, Harawa T, **Corbett EL**, Chaisson RE, Dowdy DW. Screening for tuberculosis among adults newly diagnosed with HIV in sub-Saharan Africa: a cost-effectiveness analysis. *JAIDS* 2015;70(1):83-90.
14. Chikovore J, Hart G, Kumwenda M, Chipungu GA, **Corbett EL**. "Mere cough -- men must chew Conjex, gain strength, and continue working": provider expectation dynamics and tuberculosis care-seeking implications in Blantyre, Malawi. *Global Hlth Action* 2015; 31;8:26292
15. Sloan DJ, Mwandumba HC, Garton NJ, Khoo SH, Butterworth AE, Allain TJ, Heyderman RS, **Corbett EL**, Barer MR, Davies GR. Pharmacodynamic modelling of bacillary elimination rates and detection of bacterial lipid bodies in sputum to predict and understand outcomes in treatment of pulmonary tuberculosis. *Clin Infect Dis*. 2015;61(1):1-8
16. Vynnycky E, Sumner T, Fielding KL, Lewis JJ, Cox A, Hayes RJ, **Corbett EL**, Churchyard GJ, Grant AD, White RG. Tuberculosis control on South African goldmines: mathematical modelling of a trial of community-wide isoniazid preventive therapy. *Am J Epi* 2015 15;181(8):619-32.
17. Kumwenda MK, Munthali A, Theobald S, Phiri M, Mwale D, MacPherson E, Theobald S, Gutteburg T, **Corbett EL**, Desmond N. Factors shaping initial decision-making to self-test amongst cohabiting couples in urban Blantyre, Malawi: *AIDS and Behaviour* 2014;18:S396-404
18. MacPherson P, Lalloo DG, Webb EL, Maheswaran H, Choko AT, Makombe SD, Butterworth AE, van Oosterhout JJ, Desmond N, Thindwa D, Squire SB, Hayes RJ, **Corbett EL**. Effect of Optional Home Initiation of HIV Care Following HIV Self-Testing on Antiretroviral Therapy Initiation Among Adults in Malawi: A Randomized Clinical Trial. *JAMA*. 2014 Jul;312(4):372-9.
19. Chikovore J, Hart G, Kumwenda M, Chipungu GA, Desmond N, **Corbett EL**. Control, struggle, and emergent masculinities: a qualitative study of men's care-seeking determinants for chronic cough and tuberculosis symptoms in Blantyre, Malawi. *BMC Public Health* 2014, 14:1053
20. Churchyard GJ, Fielding KL, Lewis JJ, Coetzee L, **Corbett EL**, Godfrey-Faussett P, Hayes R, Chaisson RE, Grant AD; Thibela TB Study Team. A trial of mass isoniazid preventive therapy for tuberculosis control. *N Engl J Med*. 2014;370:301-10.

Best publications more than 5 years old

21. **Corbett EL**, Bandason T, Duong T, Dauya E, Makamure B, Churchyard GJ, Williams BG, Munyati SS, Butterworth AE, Mason PR, Mungofa S, Hayes RJ. Comparison of two active case-finding strategies for community-based diagnosis of symptomatic smear-positive tuberculosis and

control of infectious tuberculosis in Harare, Zimbabwe: a cluster-randomised trial. *Lancet*. 2010;376(9748):1244-53.

22. **Corbett EL**, Makamure B, Cheung YB, Dauya E, Matambo R, Bandason T, Munyati SS, Mason PR, Butterworth AE, Hayes RJ. HIV incidence during a cluster-randomized trial of two strategies providing voluntary counselling and testing at the workplace, Zimbabwe. *AIDS.* 2007 Feb 19;21(4):483-9.
23. **Corbett EL**, Bandason T, Cheung YB, Munyati S, Godfrey-Faussett P, Hayes R, Churchyard G, Butterworth A, Mason P. Epidemiology of tuberculosis in a high HIV prevalence population provided with enhanced diagnosis of symptomatic disease. *PLoS Med*. 2007 Jan;4(1):e22
24. **Corbett EL**, Charalambous S, Moloi VM, Fielding K, Grant AD, Dye C, De Cock KM, Hayes RJ, Williams BG, Churchyard GJ. Human immunodeficiency virus and the prevalence of undiagnosed tuberculosis in African gold miners. *Am J Respir Crit Care Med*. 2004 Sep 15;170(6):673-9. PMID: 15191919.
25. **Corbett EL**, Watt CJ, Walker N, Maher D, Williams BG, Raviglione MC, Dye C. The growing burden of tuberculosis: global trends and interactions with the HIV epidemic. *Arch Intern Med*. 2003 May 12;163(9):1009-21. PMID:12742798

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Fern Terris-Prestholt, PhD

Bio sketch

- **Research**: >50 peer reviewed articles in the field of HIV & STI economics, including Nature and Journal of Health Economics.
- **Fundraising**: Raised and/or managed grants of >$2 million, PI on 10 projects, Co-PI on 7, subject lead on $25 mill project.
- **Management**: Experience leading large multi-country research and supervising junior collaborators and LSHTM staff.
- **Leadership**: International reputation and networks in the area of cost-effectiveness and uptake of new HIV prevention technologies and point of care diagnostics for HIV and syphilis; DCE for intervention design.
- **External citizenship**: Associate Editor 'BMC Health Services Research'; External funding reviewer.
- **Teaching**: 7 years as module organiser for advanced health economics module which is highly rated and has grown to over 70 students; introduction to health economics seminar leading >10 years; supervision > 25 summer projects.
- **RD training**: 2 PhD student successfully defended on time, in progress: 4 as Lead; 2 as Co-supervisor.
- **Philosophy**: intrinsically motivated by collaborative policy oriented research founded on mutual capacity building.

Education

Oct 2004- Dec 2009 (part-time) London School of Hygiene & Tropical Medicine, London, UK
Ph.D. Health economics
Dissertation: *Determinants of women's demand for barrier methods for HIV prevention in South Africa.*

Sep 1996- June 1998 Wageningen University, Wageningen, The Netherlands
M.Sc. Development economics
Thesis: *The impact of men's and women's farm labour on health in Ghana: the effect of income growth and development.*

Sep 1990 – May 1995 Macalester College, St. Paul, MN, USA
B.A. Majors: Economics and Political Science
Thesis: *The effects of structural adjustment on health in Africa*.

Employment

Oct 2015-Present **Associate Professor in the Economics of HIV** Global Health & Develoment, London School of Hygiene & Tropical Medicine, London, UK
Research into the introduction of new HIV/AIDS and STI prevention and treatment interventions in low and middle income countries (demand analysis and cost effectiveness); fundraising for research projects and building research team around uptake of new technologies.

Jun 2015-Aug 2015 **Visiting Professor** Dalla Lana School of Public Health, University of Toronto,

Toronto, Canada

Oct 2006 – Sep2015 **Lecturer in the Economics of HIV** Global Health & Development, London School of Hygiene & Tropical Medicine, London, UK
Research into the introduction of new HIV/AIDS and STI prevention and treatment interventions in low and middle income countries (demand analysis and cost effectiveness); fundraising for research projects and management of research projects and teams.

Oct 2001 – Sep 2006 **Research Fellow** Health Policy Unit, London School of Hygiene & Tropical Medicine, London, UK
Cost and cost-effectiveness analyses of the HIV prevention strategies; modelling of cost functions of STD treatment, and demand functions for male and female condoms.

April 2000 – Sep 2001 **Research Assistant** Health Policy Unit, London School of Hygiene and Tropical Medicine, London, UK
Costing of HIV/ STI/TB interventions in developing countries.

May 2006 – Nov 2006 **Visiting Researcher** Reproductive Health and HIV Research Unit, University of the Witwatersrand, Soweto, South Africa
Developed questionnaire using focus group discussions and in-depth interviews
Led a team of 23 fieldworkers in conducting a household survey among >1000 women in a Johannesburg township.
Conducted follow-up household interviews among survey participants.

Jan 1999 – April 2000 **Research** Fellow Institute for Medical Technology Assessment, Erasmus University, Rotterdam, Netherlands
Cost-effectiveness analysis of a controlled trial of improved stroke services in the Netherlands.
Investigated the cost of palliative care for terminal cancer patients in the Netherlands.

Research

Roles in Research Projects and Leadership

Research into the economics of HIV/AIDS in low and middle income countries; fundraising for research projects and management of research projects and teams:

- Discrete choice experiments for optimal programme design and uptake prediction: leading methodological innovations in the applications of DCEs for optimising trial and programme design; → next steps include evaluating their predictive value and integrating predictions into impact models.
  - Senior Economist: Increase uptake of HIV self-testing and linkages to care in Africa. The economics research has a central role in the proposal – contributing preference studies to inform determinants of HIV testing uptake and cost studies. An important component of the economics studies is on demand creation and linking HIV+s to care and treatment using marketing and demand stimulation (including financial incentives). This study will allow further building demand side studies of uptake of new HIV technologies. Economics team leadership: 1 LSHTM RF and post-doc, 1 Liverpool University based post-doc, 1 DrPh student, and 5 in-country health economics
  - Conceptualise, lead and supervise 1 RF and 1 external RF: Predicting uptake for ARV-based prevention technologies among FSW, discordant couples, adolescent girls and general population in South Africa: a DCE (2014-15)
  - Conceptualise and supervise PhD student: The economics of sexwork: Using DCE predictions

in impact modelling (2014-15)

- Conceptualised, obtained funding and conducted: Rapid DCEs to inform trial design: evaluation of DCE integrated into formative research phase of RCT of demand stimulation for male circumcision in Tanzania (2014)
- Conceptualised, obtained funding and supervised study: Integrated HIV and family planning services in Malawi (2010-2013); use DCEs to inform the role out of youth friendly HIV and family planning services
- Lead economist: New women HIV prevention technologies in South Africa (2002-2009). Predicted uptake and determinants of uptake

- Modelling cost effectiveness of new HIV prevention product introduction and distribution strategies:
  - Conceptualised, obtained funding and supervise study: SILCS diaphragm cost effectiveness in South Africa – Supervise 1 RF
  - Jointly conceptualised and obtained funding; Supervised study: Distribution of Pre-exposure prophylaxis among discordant couples in Nigeria; Risk aversion and adherence in South Africa;
  - Lead economist: Cost-effectiveness of introduction of tenofovir gel in South Africa over 15 years

- Coordination multi-country studies of Point of care diagnostics:
  - Supervise study: HIV point of care (POC) monitoring technologies: policy introduction study and cost modelling in Tanzania, South Africa and Zambia (2013-2015) – Supervise 1 RF
  - Coordinated and supported study: Introducing POC diagnostics for HIV and syphilis in China, Brazil, Tanzania, Peru and Zambia (2007-2011) - Support 5 in-country economists
- Lead cost and cost-effectiveness analyses of the HIV prevention and STI treatment strategies.
  - Conceptualise Economics study, design and supervised study: Integration of HIV Family planning services in Kenya, Malawi, and Swaziland (2007-2009) - Supervise 3 RFs/RAs based in Kenya and Swaziland in collection of clinic level costs
    - Supervised study: Uptake of HPV vaccination in Tanzania (2011) – supervise 1 RF

Grants and Funding for Salary Support	Funder	Role	Value	Directly managed	Salary posts funded	Period
Live grants						
USAID APS microbicides Introduction –	USAID	Lead economist	$25 million	$250,000	Self: 20% - 2 yrs RF: 50% - 2 yrs	2017-2020
Stimulating and shaping the market for HIV self-testing in Africa: two-tier demonstration and evaluation of accuracy and linkage in 4 countries	UNITAID	Lead Economist	$61 million	Yr1&2 und. Contr.	*Phase 1* Self: 60% - 4 yrs; RF: 100% - 4 yrs, 2 RF: 2 yr	2015-2019
Crowdsourcing to inform strategies to increase HIV testing in China	NIH	Economist			Self: 10% - 5 yrs	2015-2020
Completed grants						
SILCS Cost-Effectiveness Analysis	PATH	PI	$126,985	$115,863	Self: 33% - 1	2015-

					yr; RF: 16% - 1 year	2016
Introduction of new HIV monitoring and diagnostics in South Africa, Tanzania and Zambia	UNITAID	Economist	$7 million	$147,000	Self:20% - 2 yrs; RF: 54% - 2 yrs	2013-2015
Rapid DCEs to inform the design of a VMMC demand creation strategy in Tanzania	CDC-Atlanta	PI with NIMR Tanzania	$56,091	$35,294	Self: 25% 1 yr; external RF: 33% - 1 yr	2013-2015
Increasing uptake of voluntary medical male circumcision among men aged 20-34 years in Njombe & Tabora Regions, Tanzania: A cluster RCT	CDC Atlanta	Co-PI: with NIMR Tanzania & JPIEGO			Self: 8% - 1 yr RF: 30% - 1 yr	2013-2015
ART-Based Prevention	Gates Founda-tion	Co-PI with Watts & Vickerman	$1,004,046	$1,004,046	Self: 60% - 1 yr; RF: 50% - 3 yrs	2011-2014
International Academic Fellowship: Stimulating demand for HIV prevention: consolidating a decade of research	Lever-hulme Trust	PI	£12,485	£12,485	*Travel award*	Jun-Aug 2015
DCE of Provider preferences for IPTp	MMV	Economist			RF: 75% - 1 yr; passed to external economist	2013-2014
Cost-effectiveness of dual HIV and syphilis POC tests phase 1+ 2	WHO	PI	$40,950	$40,950	Self: 10% - 1 yr; RF 10% - 1 yr	2013-2014
Faculty Research Fellowship	PHP-LSHTM				Self:100% - 2 yrs	2011-2013
Assessing the cost-effectiveness of integrating sexual and reproductive health and HIV in Malawi	IPPF	PI	$20,000	$20,000	RF: 25% - 1 yr	2010
Tanzania Delivery, uptake and acceptability of HPV vaccination in Tanzanian girls -WHO HPV costing grant	WHO	Co-PI with CTU	$25,000	$0	external RF 25% 1 yr	2010
Expanding access to SRH & HIV services for rural youth in Malawi: impact on cost, service uptake and sustainability in FPAM static and outreach clinics	IPPF	PI	$408,256	$408,256	Self: 15% - 3 yrs; RF: 100% - 3 yrs	2010-2013
HIV screening in Primary Care: an economic analysis	Tower Hamlets PCT	PI	£17,873	£17,873	Self - 25%, passed to Andreia Santos	2009
Assessing the benefits of	Gates	Co-PI with	$12,521,6		Self: 40%,	2009-

integrated HIV and Reproductive Health services in Kenya, Swaziland and Malawi (Integra Initiative)	Founda-tion	IPPF	98		200% RF, 100% RA- 5 yrs	2013
Cost analysis of integrating HIV care into family planning services in Malawi: collection of baseline data	IPPF	PI	$30,000	$30,000	RF: 25% - 1 yr	2008
Cost-effectiveness of rapid syphilis test implementation in Brazil, Tanzania and China	WHO	PI	£94,735	£94,735	Self 25% - 3 yrs; RA 40% 1 yr	2008-2011

RF: research Fellow, RA: research assistant

Supporting junior researchers

I have been responsible for training and supervising between 1 and 7 junior staff and post-docs since 2006. Under my guidance a research fellows have won competitive fellowships:

- 2017 Laura Cornelsen: MRC Career Development award, 5 years post-doctoral fellowship
- 2016 Jason Ong: NHMRC Early Career Fellowship, Australia
- 2015 Matt Quaife ESRC for a 1+3 MSc-PhD scholarship
- 2014 Aurelia Lepine: ESRC/MRC fellowships in the economics of health.
- Christine Michaels: IPPF grant to provide 3 year salary to support for full time staff PhD.

I have also supported numerous in-country economists and lead a team of 23 fieldworkers to collect a survey of > 1000 women in South Africa (2005). All 4 of my in country economists on the HIVST project have been supported to develop PhD proposals and have now registered.

Publications

Peer reviewed articles in journals

In circulation

Terris-Prestholt, F. et al Using DCEs to improve equity in access to socially marketed HIV prevention products in South Africa. In preparation for Medical Decision Making.

Submissions

Fern Terris-Prestholt, Evodius Kuringe , Jonathan Grund, Marya Plotkin, Haika Osaki, The VMMC study team, Jerry Mshana, Hally Mahler, Helen Weiss , Mwita Wambura Incorporating user preferences in complex intervention development: Contributions of DCE to stimulating demand for male circumcision in Tanzania. Submitted to Implementation Science. September 2017

Matthew Quaife, Aurélia Lépine, Kathleen Deering, Fern Terris-Prestholt, Shajy Isac, RS Paranjape, Peter Vickerman. The Cost of Safe Sex: Evidence of a Price Premium for Sex without a Condom among Female Sex Workers in India. Rejected from Health Economics, revising for World Development submission Target September 2016.

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1. Torres-Rueda, S Cost-Effectiveness of a Tailored Demand Creation Intervention to Increase Uptake of Voluntary Medical Male Circumcision among Men Aged 20-34 Years in Tanzania. *In Press J AIDS*
2. Tang W, Liu C, Cao B, Pan SW, Zhang Y, Ong J, Fu H, Ma B, Fu R, Yang B, Ma W, Wei C, Tucker JD; SESH Study Group. Receiving HIV Serostatus Disclosure from Partners Before Sex: Results from an Online Survey of Chinese Men Who Have Sex with Men. AIDS Behav. 2018 Feb 22. doi: 10.1007/s10461-018-2062-0
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6. SESH Study Team, Barry Bayus; Bolin Cao; Zihuang Chen; Maya Durvasula; Kevin Fenton; Rong Fu; David Glidden; Larry Han; Lisa Hightow-Weidman; Wenqi Hu; Shujie Huang; Michael Hudgens; Dianmin Kang; Haochu Li; Meizhen Liao; Chuncheng Liu; Wei Ma; Jessica Mao; Kate Mitchell; Katie Mollan; Jason Ong; Stephen Pan; Rosanna Peeling; Yilu Qin; Adam Saffer; Kumi Smith; Gabriella Stein; Songyuan Tang; Weiming Tang; **Fern Terris-Prestholt**; Joseph D. Tucker; Peter Vickerman; Cheng Wang; Chongyi Wei; Li Xue; Bin Yang; Ligang Yang; Wei Zhang; Tiange P. Zhang; Ye Zhang; Heping Zheng. Crowdsourcing to promote HIV testing among MSM in China: study protocol for a stepped wedge randomized controlled trial. *Trials*. 2017, 18:447.
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M, **Terris-Prestholt F**, Hayes RJ, Changalucha J, Weiss HA; VMMC-Tanzania Study Group.Increasing voluntary medical male circumcision uptake among adult men in Tanzania**.** AIDS. 2017 Apr 24;31(7):1025-1034. doi: 10.1097/QAD.0000000000001440.

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Research reports/discussion papers

Terris-Prestholt F, Santos S, Sweeney S, Kumaranayake L. 2011 The Rapid Syphilis Test Toolkit. Implementation 1: Guidelines for Cost Effectiveness Analysis of Syphilis Screening Strategies. https://globalhealthdiagnostics.tghn.org/site_media/media/articles/IMPLEMENTATION_1.pdf

Watts C, Foss A, Kumaranayake L, Cox A, **Terris**-**Prestholt** F, Vickerman P. Identifying optimal strategies for microbicide distribution in India and South Africa: Modelling and cost-effectiveness

analyses. Dec 2008. http://www.ipmglobal.org/sites/international.ixm.ca/files/attachments/IPM_LSHTM_ModelingReport_ENGLISH_Dec2008.pdf

Vickerman P, **Terris-Prestholt** F (2006). Estimating the DALYs saved per syphilis infection treated from two African settings. Report prepared for RAND corporation.

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Chapters in edited books

Kumaranayake L, Watts C, **Terris-Prestholt F**, Vickerman P. "Linking Costs and Effectiveness: Dynamic Challenges for HIV Prevention." In Roberts J and Archibald K. eds. The Economics of Infectious Diseases. Oxford University Press: Oxford. 2006.

Other published output

Terris-Prestholt F, Windmeijer F. 2015 How to Sell a Condom? The impact of demand creation tools on male and female condom sales in resource limited settings. Canadian Centre for Health Economics Working Paper 150017. http://www.canadiancentreforhealtheconomics.ca/wp-content/uploads/2015/10/Terris-Prestholt-Windmeijer1.pdf

Vickerman P and **Terris-Prestholt** F 2013 Webmodel: Tool to explore cost effectiveness of syphilis screening strategies, **www.idc-dx.org**.

Fern Terris-Prestholt, Andreia Santos, Sedona Sweeney, Lilani Kumaranayake. 2011 The Rapid Syphilis Test Toolkit. Implementation 1: Guidelines for Cost Effectiveness Analysis of Syphilis Screening Strategies. www.lshtm.ac.uk/itd/crd/research/rapidsyphilistoolkit/rapid_syphilis_test_toolkit.pdf

Dissemination of outputs

Conference presentations made

Terris-Prestholt Organised Session: Can Social Franchising Deliver Sustainable And Equitable Public Health Programs In Low And Middle Income Countries? Empirical Evidence And Methodological Opportunities. IHEA 2017 Boston

Terris-Prestholt
D'elbee
Quaife
Torres
Sande
IAS
Mangenah
Johnson (utility analysis)
POSTER: Mwenge;

Terris-Prestholt, F. et al Using DCEs to improve equity in access to socially marketed HIV prevention products in South Africa. 2016 IAHPR Hamburg July

Terris-Prestholt, F. et al Using DCEs to improve equity in access to socially marketed HIV prevention products in South Africa. 2016 HESG Manchester Jan 6-8,

Terris-Prestholt et al Organised Session: Innovative Methods for Conducting Economic Evaluations in Low- and Middle-Income Countries: Challenges and Opportunities IHEA Milan July 2015

Terris-Prestholt et al Incorporating DCE Uptake Predictions into Economic Evaluation Models: The Virtuous Circle of Highly Effective HIV Prevention Products . IHEA Milan July 2015 Oral

Terris-Prestholt et al Using Rapid Choice Experiments to Inform Study Design: an example from formative research on voluntary medical male circumcision in Tanzania IHEA Milan July 2015 Oral

Fern Terris-Prestholt, Matt Quaife, Peter Vickerman. Incorporating DCE Uptake Prediction of New HIV Prevention Products into Cost Effectiveness Models. International Association of Health Preference Research. Amsterdam Nov 2014

Fern Terris-Prestholt, Matt Quaife, Sinead Delany, Helen Rees, Charlotte Watts, Peter Vickerman. The Virtuous Circle of Highly Effective New Prevention Technologies: Incorporating User Preferences into Impact Models. Research for Prevention (R4P), Cape Town South Africa Oct 2014

Lepine A, **Terris-Prestholt** F, Vickerman P Determinants of HIV testing among Nigerian Couples.: a multi level modelling analysis. International Health Economic Congress, Sydney 2013 – **Best Poster Award** $1000

Terris-Prestholt et al Organised Session: Economics of Implementing Rapid Diagnostics into Health Systems in Low and Middle Income Countries IHEA 2011

Terris-Prestholt F, Macphail C, Rees H, Watts C. The Impact of a Prescription-Only Microbicide on Women's Access in Urban South Africa. Microbicides 2010, Pittsburgh May 22-25, 2010 Poster LB15.

Terris-Prestholt F, Kumaranayake L, MacPhail C, Rees H, Watts C. Variation in women's preferences for microbicide distribution strategies in South Africa: Analysis of a discrete choice experiment. Poster IHEA Beijing, July 2009.

Terris-Prestholt F, Kumaranayake L, MacPhail C, Rees H, Watts C. Will microbicide introduction affect condom use? Analysis of a discrete choice experiment among urban South African women. Poster IHEA Beijing, July 2009.

Terris-Prestholt F, Kumaranayake L, MacPhail C, Rees H, Watts C. Determinants of South African Women's Demand for Microbicides and their Distribution: Analysis of a Discrete Choice Experiment. International AIDS Economics Network meeting, Cuernavaca, Mexico 1-2 August, 2008.

Terris-Prestholt F, Kumaranayake L, MacPhail C, Rees H, Watts C. Microbicide Uptake Likely To Be Higher Among Women Not Using Condoms: Results From A Discrete Choice Experiment In Johannesburg, South Africa. Poster number: A-072-0156-14275. 17th International AIDS Conference in Mexico City 3-8 August 2008.

Terris-Prestholt F, Kumaranayake L, MacPhail C, Rees H, Watts C. Using Women's Preferences To Design A Microbicide Distribution Strategy In South Africa. Poster number A-072-0171-14623. 17th International AIDS Conference in Mexico City 3-8 August 2008.

Terris-Prestholt F, Kumaranayake L, MacPhail C, Rees H, Watts C. The Impact Of Different Microbicide Efficacies On Women's Demand For Microbicides Poster Presentation Abs TC-531, Microbicides 2008 Conference, New Delhi, India. 24th-27 February 2008.

Terris-Prestholt F, Kumaranayake L, MacPhail C, Rees H, Watts C.Facilitating Product Use: Using Women's Preferences To Design Distribution Strategies Oral Presentation Abs 247, Microbicides 2008 Conference, New Delhi, India. 24th-27 February 2008.

Terris-Prestholt F, Kumaranayake L, Women's demand for barrier methods for HIV prevention in South Africa: Analysis of a discrete choice experiment using the random parameters logit

estimator. HESG, Norwich, January 2008.

Terris-Prestholt F, Kumaranayake L, Macphail C, Rees H, Watts C. Women's Willingness to Pay for Barrier Methods for HIV Prevention in South Africa: A Comparison of the Female Condom, Diaphragm, and Microbicides. IHEA 2007 6th World Congress 2007 Copenhagen, Denmark July 5-11, 2007

Terris-Prestholt F, Kumaranayake L, Macphail C, Rees H, Watts C. Distributing barrier methods for women: determinants of willingness to pay for microbicides, the diaphragm and the female condom. XVI International AIDS Conference, Toronto 13-18 August 2006

Terris-Prestholt F, Kumaranayake L, MacPhail C, Rees H, Watts C. Determinants of willingness to pay for barrier methods: microbicides, diaphragm and female condom. Microbicides 2006 Cape Town April 2006 C 577

Terris-Prestholt F, Kumaranayake L, MacPhail C, Taljaard D, Tsepe M, Phatedi S, Rees H, Watts C. Preferences for female barrier methods and their distribution: what South African women want. Microbicides 2006 Cape Town April 2006 C 579

Terris-Prestholt F, Kumaranayake L, Nowitz D, Mortimore G, Rowan J, Barnes J, Watts, C. Can intensive advertising of HIV-prevention technologies lead to lower unit costs? Panel data estimates of male and female condom social marketing in developing countries. 5th World Congress of the International Health Economic Association, Barcelona, July, 2005.MO-0900-1000-40.006-4.

Terris-Prestholt T, Kumaranayake L, Obasi A, Cleophas-Mazige B, Makokha M, Ross D, Hayes R. Costs of an adolescent sexual health programme in Mwanza, Tanzania: pilot costs and estimates for district-wide implementation. Submitted to the 15th International AIDS Conference, Bangkok, July 2004. TuPeC4956

Terris-Prestholt F, Nowitz D, Kumaranayake L; Mortimore G; Rowan J; Barnes J, Watts C. How to sell a condom? The impact of promotion on male and female condom sales and unit costs. Presentation the International AIDS Economics Network Meeting, Bangkok, July 2004 Oral

Terris-Prestholt F, Foster S, Kumaranayake L, Kamali A, Kengeya-Kayondo J, Whitworth J. Resource requirements of a community-based intervention for behaviour change and treatment of sexually transmitted infections in Masaka, Uganda, 1996-1999. International AIDS Economics Network Meeting, Bangkok, July 9-10 2004

Terris-Prestholt F, Nowitz D, Kumaranayake L, Mortimore G, Rowan J, Barnes J, Watts C. Launching microbicides, how important is promotion? Lessons from condom social marketing. Microbicides 2004, London, March 2004. 02670

Terris-Prestholt F, Delany S, Vickerman P. et al "Are targeted HIV prevention activities cost-effective in high prevalence settings? Results from Johannesburg, South Africa" 4th World Congress of the International Health Economic Association, San Francisco, June 2003.

Terris-Prestholt F, Ginwalla R, Kumaranayake L, et al "The cost-effectiveness of the Zambian ProTEST project: integrating voluntary counselling and testing with tuberculosis activities." 14th International AIDS Conference, Barcelona. July 2002

Terris-Prestholt F, Delany S, Vickerman P. et al. "Cost-effectiveness of a brothel-based sexually transmitted infection service among highly mobile sex-workers in Johannesburg, South Africa." 14th International AIDS Conference, Barcelona. July 2002

Terris-Prestholt F, Foster S, Kumaranayake L. "Comparative Analysis of the Costs of STD interventions in Low-Resource Settings in Sub-Saharan Africa" 3rd World Congress of the International Health Economic Association, York. July 2001

Terris-Prestholt F, Kumaranayake L. "Model-based evaluation of the Replication of STD interventions: Implications for cost and cost-effectiveness." 3rd World Congress of the

International Health Economic Association, York. July 2001

Contributions to conference presentations

Johnson, C, et al. A clinical utility risk-benefit analysis for HIV self-testing Poster TUPEC0834 IAS 2017, 23-26 July, Paris, France

Indravudh, Optimising uptake of HIV testing among young people: a mixed-methods study on HIV self-testing preferences in Zimbabwe and Malawi Poster MOPED1111 IAS 2017, 23-26 July, Paris, France

Sande, L, .. Terris-Prestholt, F. A user costs analysis for HIV testing among rural communities in Malawi Poster TUPED1242 IAS 2017, 23-26 July, Paris, France

Mwenge, L. …. Terris-Prestholt, F. HIV testing and counselling (HTC) costs in public sector settings in Southern Africa: evidence from Malawi, Zambia and Zimbabwe. Poster MOPED1078 IAS 2017, 23-26 July, Paris, France

D'Elbee, M, … Terris-Prestholt, F. Informing targeted HIV self-testing service delivery in Malawi and Zambia: a multi-country discrete choice experiment Poster MOPED1095 IAS 2017, 23-26 July, Paris, France

Sibande, E, et al How should we configure services to maximise uptake of couples HIV testing: results of a qualitative study and discrete choice experiment from rural Zimbabwe. Poster TUPED1259 IAS 2017, 23-26 July, Paris, France

Vickerman, P, …., Terris-Prestholt, F. HIV prevention is not all about HIV efficacy: how the uptake and effectiveness of HIV prevention products may rely on pregnancy and sexually transmitted infection prevention Poster WEPEC0953 IAS 2017, 23-26 July, Paris, France

Terris-Prestholt, et al Cost-effectiveness of external quality assurance to prevent early infant mis-diagnosis of HIV in 4 African countries. Poster MOPED1184 IAS 2017, 23-26 July, Paris, France

Torres-Rueda, S, …, Terris-Prestholt, F. Spending to alleviate demand constraints lowers unit costs: a cost-effectiveness analysis of voluntary medical male circumcision to prevent HIV in Tanzania Poster MOPED1113 IAS 2017, 23-26 July, Paris, France

Quaife, M, Terris-Prestholt, F. et al Valuing the synergistic benefits of multipurpose HIV and pregnancy protection: an economic evaluation of multipurpose prevention products in South Africa Poster TUPEC0892 IAS 2017, 23-26 July, Paris, France

Mangenah, C, et al. Economic evaluation of non-financial incentives to increase couples HIV testing and counselling uptake in Zimbabwe Oral TUAD0203 IAS 2017, 23-26 July, Paris, France

Sibande, E, … Terris-Prestholt, F Preferences for models of HIV self-test kit distribution: results from a qualitative study and choice experiment in a rural Zimbabwean community Poster MOPED1114 IAS 2017, 23-26 July, Paris, France

Quaife, M, Terris-Prestholt, et al.Who will use HIV prevention products and what might stop them? A latent class analysis, 6th IAHPR, 7 July 2017 Boston

Pan, S, .. , Terris-Prestholt, F. HIV testing preferences among men who have sex men in China: a discrete choice experiment, 6th IAHPR, 7 July 2017 Boston

Collin Mangenah1, Lawrence Mwenge2, Linda Sande3, Euphemia Sibanda1, Progress Chiwawa1,

Tariro Chigwenah1, Miriam Mutseta7, Nurilign Ahmed4, Marc d'Elbée4, Pitchaya Indravudh3, Hendy Muralitharan5, Melissa Neuman4, Cheryl Johnson6, Helen Ayles2,4, Elizabeth L Corbett3,4, Karin Hatzold7, Frances M Cowan1,8, Fern Terris-Prestholt4. The costs of community based HIV self-test (HIV-ST) kit distribution: Results from three (3) district sites in Zimbabwe. 11th INTEREST Workshop, 16-19 May 2017, Lilongwe, Malawi

Quaife M, Terris-Prestholt F, Eakle R, Cabrera M, Delany-Moretlwe S, Vickerman P. (2017 'The effect of HIV prevention products on incentives to supply unprotected commercial sex in South Africa: Exploring the stated preferences of female sex workers. International Choice Modelling Conference Cape Town, South Africa 3 – 5 April 2017.

Pitchaya Indravudh1, Marc D'Elbee2, Moses Kumwenda1, Augustine Choko3, Doreen Sakala1, Thokozani Kalua4, Cheryl Johnson5, Karin Hatzold6, Liz Corbett3, Fern Terris-Prestholt2 (2017) INFORMING HIV SELF-TESTING SERVICES IN MALAWI USING DISCRETE CHOICE EXPERIMENTS 2017 Conference on Retroviruses and Opportunistic Infections (CROI) Poster Presentation 1692 February 13 to 16, 2017,Seattle, Washington

Torres-Rueda, S et al. Introduction of Point-of-Care Monitoring and Diagnostic Technologies for HIV: Decision-Making Processes in Tanzania and Zambia. ASLM2016 in Cape Town, 3-8 December 2016. Poster presentation.

Quaife M, Eakle R, Cabrera M, Vickerman P, Delany-Moretlwe S, Terris-Prestholt, F.14/7/2016. European Health Economics Association (EuHEA) Congress. Hamburg, Germany. One size will not fit all: Divergent stated preferences for new antiretroviral-based HIV prevention products across adults, adolescents and female sex workers in South Africa.

Quaife M, Terris-Prestholt F, Eakle R, Cabrera M, Delany-Moretlwe S, Vickerman P. How might new HIV prevention products change incentives in commercial sex work? Exploring the stated preferences of female sex workers in South Africa. 13/7/2016. European Health Economics Association (EuHEA) Congress. Hamburg, Germany.

Quaife M, Terris-Prestholt F, Vickerman P.12/7/2016. International Academy of Heath Preference Research. Hamburg, Germany. A DCE to explore how new HIV prevention products might change risk incentives in sex work.

Quaife M, Terris-Prestholt F, Di Tanna GL, Cabrera M, Vickerman P 21/6/2016. Health Economics Study Group. Gran Canaria, Spain. Reliable estimates of demand where one size does not fit all: Accounting for the external validity of discrete choice experiments in predicting uptake for new HIV prevention products

Quaife, M; Lepine, A; Isac, S; HL Mohan; Moses S; Bhattacharjee, P; BM Ramesh; Terris-Prestholt, F; Beattie, T; Vickerman, P.15/7/2015. International Health Economics Association Congress. Milan, Italy. The Price of Safe-Sex: Evidence from a Natural Experiment among Indian Sex-Workers.

Quaife, M; Lepine, A; Isac, S; HL Mohan; Moses S; Bhattacharjee, P; BM Ramesh; Terris-Prestholt, F; Beattie, T; Vickerman, P.8/1/2015. Health Economics Study Group. Leeds, UK. The Price of Safe-Sex: Evidence from a Natural Experiment among Indian Sex-Workers.

Quaife M, Terris-Prestholt, F, di Tanna, GL, Vickerman, P. Accounting for the imperfect external validity of discrete choice experiments when predicting demand. Poster 1/11/2016. ISPOR 19th Annual European Congress.

Quaife M, Eakle R, Cabrera M, Vickerman P, Delany-Moretlwe S, Terris-Prestholt, F. 18/10/2016. Research for Prevention Conference. Chicago, USA. One size will not fit all: Divergent stated

preferences for new antiretroviral-based HIV prevention products across adults, adolescents and female sex workers in South Africa.

Quaife M, Terris-Prestholt F, Eakle R, Cabrera M, Delany-Moretlwe S, Vickerman P.How might new HIV prevention products change incentives in commercial sex work? Exploring the stated preferences of female sex workers in South Africa. Poster 19/10/2016. Research for Prevention Conference. Chicago, USA.

Quaife M, Eakle R, Cabrera M, Vickerman P, Delany-Moretlwe S, Terris-Prestholt, F. One size will not fit all: Divergent stated preferences for new antiretroviral-based HIV prevention products across adults, adolescents and female sex workers in South Africa. Poster 21/7/2016. 21st International AIDS Conference. Durban, South Africa.

Quaife M, Terris-Prestholt F, Eakle R, Cabrera M, Delany-Moretlwe S, Vickerman P. How might new HIV prevention products change incentives in commercial sex work? Exploring the stated preferences of female sex workers in South Africa. Poster 19/7/2016. 21st International AIDS Conference. Durban, South Africa.

Torres-Rueda, S et al. Spending more to spend less: the unit costs of a tailored demand creation intervention to increase uptake of voluntary medical male circumcision AIDS 2016, Durban Poster Discussion A-792-0515-06649

Quaife M, **Terris-Prestholt F**, Di Tanna GL, Vickerman P Accounting For The Imperfect External Validity Of Discrete Choice Experiments When Predicting Demand. Abstract# 66912 ISPOR Hamburg July 2016

M. Quaife, R. Eakle, M. Cabrera, P. Vickerman, S. Delany-Moretlwe, **F. Terris-Prestholt.** One size will not fit all: Divergent preferences for new HIV prevention products across adults, adolescents and female sex workers in South Africa. AIDS 2016, Durban

M. Quaife, R. Eakle, M. Cabrera, P. Vickerman, S. Delany-Moretlwe, **F. Terris-Prestholt.** One size will not fit all: Divergent preferences for new HIV prevention products across adults, adolescents and female sex workers in South Africa. AIDS 2016, Durban

Mwita Wambura, H Mahler, N Larke, G Mshana, J Grund, E Kuringe, M Plotkin, P Kuya, M Makokha, A Hellar, F **Terris-Prestholt**, S Kapiga, S Torres Rueda, N Bock, R Hayes, J Changalucha, HA Weiss Increasing Uptake of Voluntary Medical Male Circumcision among Men Aged 20–34 Years in Njombe and Tabora Regions, Tanzania: A Cluster Randomized Controlled Trial IAS 2015, Monday 20 July 2015 Vancouver, Canada.

M. Quaife, Aurélia Lépine, Shajy Isac, RS Paranjape, Fern Terris-Prestholt, Peter Vickerman. The Cost of Safe Sex: Evidence of a Price Premium for Unprotected Intercourse among Sex-Workers in India IHEA Milan July 2015 Oral

Mitchell KM, Prudden HJ, Ramesh BM, Washington R, Isac S, Rajaram S, **Terris-Prestholt F**, Watts CH, Vickerman P (2014). Using mathematical models to estimate the potential impact of PrEP for female sex workers and men who have sex with men in Bangalore, India. IAPAC summit: Controlling the HIV epidemic with antiretrovirals, London.

Mitchell KM, Prudden HJ, Ramesh B-792-0515-06649-792-0515-06649M, Washington R, Isac S, Rajaram S, **Terris-Prestholt F**, Vickerman P (2014). Mathematical Modelling of the Impact of PrEP for Female Sex Workers and Men Who Have Sex with Men upon HIV Incidence and Survival in Southern India. HIV Research for Prevention meeting, Cape Town.

Mitchell KM, Prudden HJ, Ramesh BM, Washington R, Isac S, Rajaram S, **Terris-Prestholt F**, Watts CH, Vickerman P (2014). Estimating the potential impact and efficiency of pre-exposure

prophylaxis for female sex workers and men who have sex with men in Bangalore, southern India. International AIDS conference, Melbourne.

Mitchell KM, Lépine A, **Terris-Prestholt F**, Vickerman P (2013). Modelling the impact and cost-effectiveness of treatment as prevention and pre-exposure prophylaxis amongst HIV serodiscordant couples in Nigeria. Pre-congress symposium on Program Science Perspective on STD/HIV Interventions, STI & AIDS World Congress, Vienna.

Leber W, McMullen H, Kerry S, Marlin N, Bremner S, Martineau A, Boomla K, Ashcroft R, Griffiths C, Millett D, Mguni S, Creighton S, Anderson J, Santos AC, **Terris-Prestholt** F, Hart G, Figueroa J. Can point-of-care HIV testing in primary care increase early detection of HIV in a high prevalence setting? The RHIVA 2 cluster randomised controlled trial. Abstract 0153 **The Lancet** 2013 382(2) pS7

Obure CD, Vassall A, Sweeney S, Michaels C, Terris-Prestholt F, Watts C, Integra Initiative: Cost and efficiency of integrated HIV and SRH services in Kenya and Swaziland. 2nd Global Symposium on Health Systems Research; Beijing. 2012

Vassall A, **Terris-Prestholt** F,Vickerman P, Watt C. Going to scale: what can we learn from cost and efficiency analyses of comprehensive HIV interventions? " Organised session 7th AIDS & Economics Pre-Conference, Washington, D.C., July 20-21 2012

Obure C, Vassall A, **Terris Prestholt** F, Michaels C, Watts C and the Integra research team. How does integration impact the costs and efficiency of delivering HIV Services. AIDS 2012

Foss A, **Terris-Prestholt** F, Vickerman Pet al. Model projections of the population-level impact, on HIV and herpes simplex virus type-2 (HSV-2), and cost-effectiveness of tenofovir gel, an antiretroviral microbicide. AIDS 2012 poster A-452-0171-06951

Michaels C, Chipeta E, Manda W, Chatuluka M, the Integra Research Team,Stackpool-Moore L, Watts C, and **Terris-Prestholt** F. (2012). “Sexual and Reproductive Health and HIV services for youth in rural Malawi: what is available and what is valued?” 2012 International AIDS Conference, Washington DC, USA. July 2012. MOPE385.

Quentin W, Watson- Jones D, Changalucha J, Hutubessy R, Edmunds J, Hayes R, Kapiga S, **Terris Prestholt** F Costs of delivering HPV vaccine to school girls in Tanzania. 27th International Papillomavirus Conference and Clinical Workshop September 17-22, 2011 Berlin, Germany Oral-05.05

Sweeney S, Mosha J, **Terris-Prestholt** F, Vickerman P, Changalucha J, Peeling R. Efficiency versus equity in screening: considerations in the scale-up of rapid syphilis testing in rural Tanzania. O2-S4.01 ISSTDR, July 2011.

Sweeney S, Mosha J, **Terris-Prestholt** F, Changalucha J, Peeling R. Efficiency versus Equity in Screening: Informing Roll-out of Rapid Syphilis Tests in Remote Tanzanian Clinics Based on Relative Economies of Scale and Increased Access. IHEA 2011.

Michaels C, Chatuluka M, **Terris-Prestholt** F, Chelewani F, Trossero A, Watts C and the Integra Research Team. (2010). “Reaching rural youth with sexual and reproductive health and HIV services in Malawi through mobile clinics: the costs of expanding integrated services.” 2010 International AIDS Conference, Vienna, Austria. July 2010. MOPE0853

Quentin W, Adu-Sarkodi Y, **Terris-Prestholt** F, LeGood R, Mayaud P. Costs of cervical cancer screening and treatment using VIA with cryotherapy in Ghana: the importance of scale. IPV2010 conference Montreal, June 21- **HPV1318-Quentin**

Cox, A.P.; Foss, A.M.; Vickerman, P.; **Terris-Prestholt**, F.; Rees, H.; Watts, C.H. Modelling the impact of a future microbicide intervention against HIV: exploratory analysis in urban South Africa Epidemics2 Conference, 2009.

Watts C, Cox AP, Foss AM, Vickerman PT, Kumaranayake L, **Terris-Prestholt** F, Mias C, Kaptur P, Mertenskoetter T. Strategies for microbicide distribution in India and South Africa: Modeling and cost-effectiveness analyses. 5th International AIDS Society Conference on HIV Pathogenesis, Treatment and Prevention, Cape Town, South Africa. 19-22 July 2009. Poster.

Cox AP, Foss AM, Vickerman PT, Chimbwete C, Okonji E, **Terris-Prestholt** F, Beksinska M, Walaza S, von Mollendorf C, Smit J, Mias C, Mertenskoetter T, Moyes J, Delany-Moretlwe S, Rees H, Kumaranayake L and Watts C. Making realistic impact projections for new HIV prevention technologies: looking beyond a product's efficacy. ISSTDR June 30- July1, 2009, London Oral presentation.

Cox A, Foss A, Kumaranayake L, Vickerman P, **Terris-Prestholt** F, Vyas S, Watts C. Identifying context appropriate strategies for introducing microbicides into different settings in order to maximise impact. 17th International AIDS Conference in Mexico City 3-8 August 2008.

Foss A, Kumaranayake L, Cox A, Vickerman P, **Terris-Prestholt** F, Vyas S, Watts C. Identifying context appropriate strategies for introducing microbicides into different settings in order to maximise impact 17th International AIDS Conference in Mexico City 3-8 August 2008

Watts C, Foss A, Cox A, Vickerman P, **Terris-Prestholt** F, Kumaranayake K. Microbicide impact in Southern India and urban South Africa: Preliminary model projections for different introduction scenarios. Microbicide Access Forum Mexico City 2 August 2008.

Kumaranayake L, Foss A, Cox A, **Terris-Prestholt** F, Vickerman P, Watts C. Cost and Cost-Effectiveness of Microbicide Introduction in Southern India and Urban South Africa Microbicide Access Forum Mexico City 2 August 2008.

Foss AM, Kumaranayake L, Cox A, Vickerman P, **Terris-Prestholt** F, Moyes J, Delany-Moretlwe S, Rees H, Watts C. Reaching communities: evaluation of alternative strategies for microbicide introduction in South Africa. Microbicides 2008 Conference, New Delhi, India. 24th-27 February 2008. [Abstract 417]. http://www.microbicides2008.com/

White R, Orroth K, Glynn J, Freeman E, Bakker R, Habbema D, **Terris-Prestholt** F, Kumaranayake L, Buvé A, Hayes R. Treating sexually transmitted infections to prevent HIV in Africa. Still a effective control strategy? ISSTDR Seattle, 2007 Oral

MacPhail C, **Terris-Prestholt** C, Kumaranayake L, Ngoako P, Rees H, Watts C. Managing male partners: women's dilemmas about overt & covert use of new barrier methods for HIV prevention. Microbicides 2006 Cape Town April 2006

Vickerman P, **Terris-Prestholt** F, Changalucha J, Watson-Jones D, Peeling R, Mabey D,. Kumaranayake L, Watts C. Modelling the cost-effectiveness of Introducing rapid syphilis tests into a congenital syphilis screening programme in Tanzania. 16th Biennial Meeting of the International Society for Sexually Transmitted Disease Reseach (ISSTDR), Amsterdam, 10-13 July 2005. WP-084.

Watts C, Kumaranayake L, Vickerman P, **Terris-Prestholt** F; International Conference on AIDS. The public health and economic benefits of microbicide introduction: model projections. Int Conf AIDS. 2002 Jul 7-12; 14: abstract no. TuPeF5307.

Teaching

ii) Training

2009-2012 Certificate in Learning and Teaching, LSHTM

ii) Inputs into the teaching programme

Research Degrees	
2018- present	PhD supervisor, Primary: Peach Indravudh: Community lead HIV Testing RCT to reach men in Malawi
2018- present	PhD supervisor, Primary: Linda Sande: HIV self-test as means for improved access and equity of testing
2017	PhD upgrading internal examiner: Darshini Govindasamy
2017	PhD upgrading internal examiner: Kaat De Corte
2017-Present	PhD supervisor, Secondary: Cheryl Johnson: Preferences by proxy: Assessing Malawian men's preferences for linkage to HIV services by asking their wives.
2015-Present	DrPh supervisor, primary: Nurilign Ahmed Cost effectiveness of alternative HIV Testing and linkage models
2014-2018	PhD supervisor, primary: Matthew Quaife. Using State Preferences to Estimate the Impact of New HIV prevention Products in South Africa
2010-2013	PhD supervisor, primary Christine Michaels, degree awarded. Assessing young people's stated preferences for reproductive health and HIV services in Malawi.
2011	PhD upgrading Internal reviewer for Meghna Ranganathan, PHP
2010	PhD upgrading committee member for Pieter Smit, ITD
2010	PhD upgrading Internal reviewer for Gillian Stynes, PHP
2005-2008	PhD advisory committee member for Sam Phiri, ITD
Teaching delivery	
2009-present	Module Organiser: Economic Analysis for Health Policy (~60-90 students)
2001-present	Tutoring 1-3 MSc students and supervising 1-6 summer projects
2005, 2009-present	Seminar leader: Introduction to Health Economics
2000- 2004	Seminar leader: Health Economics Linear Unit, LSHTM & LSE
2007-present	Seminar leader: Economic Analysis for Health Policy
2007-2009	Webboard monitor distance learning PH103
2002 –'06, '10, '12, '13	Guest lecture: Methods in costing and budgeting - study unit on Sexual Transmitted Infections
July 2002, 2003	Guest lecture: Costing methods in Sexual and Reproductive Health Research Short Course
Course management	
2009-present	Course organiser: Economic Analysis for Health Policy Continual **updating and re-designing** of workshop activities
2007-2009	Deputy course organiser distance learning PH103
2008	Assessor MSc and PG Diploma in Health Systems Management and MSc
Teaching development	
2007-present	Identify, revise and (or delegate revision of) and renew EAHP seminars in need of renewal
Citizenship	
Internal	
2013- present	Athena Swan Champion – Department of Global Health

External

Invited talks and presentations

2018 Health Economics Seminar, University of Warwick Medical School, Warwick, UK

2015 Health Economics Unit, School of Health & Population Sciences, University of Birmingham, Birmingham, UK (*Sept 10*)

2015 Centre de Recherche du CHU de Québec, University of Laval, Quebec City, Canada (*August 24*)

2015 Department of Global Health, Boston University School of Public Health (*July 30*)

2015 Department of Global Health & Population, Harvard T.H. Chan School of Public Health (*July 29)*

2015 Institute of Health Economics, Health Behaviours and Disparities, Cornell University (*July 27)*

2015 Centre for Health Economics & Policy Analysis, McMaster University, Hamilton, Canada (*June 17*)

2015 School of Social and Community Medicine, University of Bristol, Bristol, UK (*May 1*)

2014 Impact and cost effectiveness of topical microbicides: Core scenarios for HIV prevention models, Washington DC, Dec 3-4

2014 Cost effectiveness of syphilis dual test at PAHO Regional Consultation on Algorithms for Syphilis Testing and Diagnosis In Latin America and the Caribbean, Guatemala City, April 24-25

2014 Stakeholder Consultation on Priority Implementation Research to Inform Development of WHO Normative Guidance on Topical Pre-Exposure Prophylaxis, Durban, South Africa March 25-28.

2012 Modelling Microbicide Introduction, USAID hosted meeting, Washington D.C. Dec 3

2012 Update on New Prevention Technologies Microbicides, Modelling the impact and costs of introducing new prevention technologies to end the HIV pandemic, UNAIDS meeting 25–26 April, Vancouver.

2008 Determinants of South African Women's Demand for Microbicides and their Distribution: Analysis of a Discrete Choice Experiment. University of Manchester May 12.

2004 Costing STI prevention and treatment interventions in developing countries. Centre For Sexual Health & HIV Research. University College London.

2004 Preparing to deliver: introduction of microbicides. Training Day on Microbicides, UK Campaign for Microbicides, Global Campaign for Microbicides, the National AIDS Trust, Terrence Higgins Trust.

2003 Economic analysis for HIV/AIDS, STD and infectious disease control. Situational Analysis of Sexual Health Meeting, Beijing, China.

Journal Editorial Boards

2015 Associate Editor BMC Health Services Research for the section 'Health systems and services in low and middle income settings'.

Journal Reviews

BMJ, Tropical Medicine and International Health, Health Policy and Planning, Journal of Public Health Medicine, Sexually Transmitted Infections, AIDS, CERA

External Funding Review

2017 External Expert Reviewer, National Institute for Health Research- Global Health Research

2015 Deutsche Forschungsgemeinschaft (German Research Foundation)

Expert Contributions

2018	WHO Technical Working Group on Cost-effectiveness of HIV testing services
Feb 2018	WHO/UNAIDS Consultation: From Proof of Efficacy to Policy Decision, Access and Use of Products for Passive and Active Immunization to Prevent HIV Infection: Prepare for Success
2016- 2017	WHO technical working group on HIV Self-Testing
Oct 2015	WHO STI Guidelines Panel
2014-2016	Working Group on Modelling of ART Monitoring Strategies in Sub-Saharan Africa
2011-2014	UNAIDS New Prevention Technology Study Group
2011-present	HIV Modelling Consortium
2009	Research advisory committee: Testing for sexually transmitted infections: an assessment of user preferences in Brighton

Professional Memberships

2017- Present	Member: International Academy for Health Preference Research
2003-present	Member: International Health Economics Association
2003-present	Member: Health Economics Study Group

Teaching

2017	External Exam Board: MSc in Health Economics and Decision Science, UCL, UK
2012	External examiner MSc Thesis Faculty of Health Sciences, University of Cape Town, South Africa
2008	External examiner MSc Thesis Faculty of Health Sciences, University of Cape Town, South Africa
2007	External examiner MSc Thesis University of Pretoria School of Public Health, South Africa
2003-2005	Lecture: Costing methods, RHRU 7-9th Reproductive Health Research Methods Course, Johannesburg, South Africa