Rakai Health Sciences Program
Improved Health Through Research

RHSP ANNUAL REPORT 2022

The Rakai Health Sciences Program

The Rakai Health Sciences Program (RHSP) is a collaborative notfor-profit health research and service organization with a focus on community-based research, treatment and prevention of HIV and other communicable diseases in 9 districts (the Masaka region) of south central Uganda.

Vision Statement

To excel in Health Research, Disease Prevention and Care

Mission Statement

To conduct innovative health research on infectious diseases, noncommunicable diseases and reproductive health, and to provide health services to improve public health and inform policy.

Objectives and Strategic Directions:

- To conduct research relevant to Uganda and internationally, on HIV, other infectious diseases, reproductive health, and noncommunicable diseases
- To integrate research in epidemiology, demography, clinical, laboratory and social sciences
- To improve and develop infrastructure in support of research and service delivery in the Masaka region of Uganda.
- To build human capacity via training and provision of a career structure for Ugandan investigators and senior staff
- To create and build the program as a long-term, sustainable Ugandan national resource

Core Values

Creativity, Respect, Excellence, Accountability, Integrity, Team Work, Efficiency are the fundamental principles of RHSP which define its organizational culture and create a unique environment for health research and services.

Rakai Health Sciences Program Report 2022

Editorial: Prof. David Serwadda, Jackie Mckina and RHSP Team and Collaborators

Design and layout: Ensync Graphics and Jackie Mckina.

Photography: RHSP Public Relations Office

Contents

Acronyms

RHSP	Rakai Health Sciences Program
ART	Antiretroviral Therapy
HIV	Human immunodeficiency virus
AIDS	Acquired Immunodeficiency Syndrome
IGA	Income Generating Activity
MOH	Ministry of Health
GBV	Gender based Violence
DREAMS	Determined, Resilient, Empowered, Aids free, Mentored, Safe
STI	Sexually Transmitted Infection
HTS	HIV Testing Services
PEP	Post-exposure Prophylaxis
PrEP	Pre-exposure Prophylaxis
RCCS	Rakai Community Cohort Study
NCD	Non-communicable Diseases
VMMC	Voluntary Male Medical Circumcision
CDC	Centers for Disease Control and Prevention
PEPFAR	President's Emergency Plan for AIDS Relief

Forward

PROF. DAVID SERWADDA

RHSP Board Chair

It is my great pleasure to introduce the Rakai Health Sciences Program (RHSP) report for the year 2022. This program represents the continued dedication of an incredible team that has been working tirelessly for over three decades to advance global public health, through research and care and treatment of HIV infection

Since its inception, the RHSP has been at the forefront of groundbreaking HIV/AIDS research and innovation. The team's commitment to improving health outcomes through research in one of Uganda's most vulnerable regions has yielded extraordinary results. This report highlights the high impact research projects that were initiated in 2022 and discusses the preliminary results of those completed in 2022.

The program's focus on community-based research and engagement has helped to bridge the gap between scientific discovery and practical application through health service delivery. This report discusses the achievements and challenges experienced during the provision of health service delivery in the 12 districts that constitutes the greater Masaka region. From 2004 to-date, the number of people receiving HIV prevention and care from Rakai Health Sciences Program has increased to about 137,228. We continue to innovate various modalities of providing services nearer to the people as much as possible.

By collaborating with local communities and policymakers, RHSP has empowered those most affected by these diseases to take ownership of their health and well-being. We have been able to consolidate and improve on our performance particularly in tuberculosis and retention and care where we have done well. And hope to continue going into a sustained epidemic control approach.

As we look ahead to 2023, RHSP remains steadfast in its commitment to promoting evidence-based interventions and improving population health. Our pioneering work has transformed the landscape of global health and set an outstanding example for others to follow.

I am honored by this exemplary work and look forward to seeing the impact we will continue to make in the years to come.

Forward

DR JOSEPH KAGAAYI

Executive Director

I am very excited to have led the RHSP field team in the past year during the recovery from the horrors of the COVID-19 pandemic. It is unbelievable how the RHSP team has shaken off the effects of the pandemic to continue the great work of impacting science, public health, and practice.

In this annual report, we are excited to highlight milestones in science and health services delivery. We share findings on the neglected burden of sexually transmitted infections amidst the scale-up of combination HIV interventions. We examine lessons from studies on the HIV latent reservoir in the context of changing ART treatment guidelines and implications for HIV cure.

We are excited to share novel research endeavours in non-communicable diseases (NCD) examining NCD outcomes associated with rural-to-urban migration and how HIV status modifies these outcomes.

We have extended our regular cohort HIV surveillance to hard-to-reach populations to understand the impact on HIV incidence and prevalence estimates, should they be missed in surveys, and how these populations and their sexual networks drive the HIV epidemic in the context of CHI. We share lessons on the effect of social determinants on sexual and reproductive health outcomes among adolescents.

Our programs across the Masaka region have continued to harness the value of continual quality improvement anchored in frequent effective data use to drive improvements in coverage with service programs. We celebrate the 20 years of PEPFAR support which have saved several lives and impacted the health of families and communities. We are profoundly grateful to the stakeholders, including funding agencies; collaborators; district local governments; and communities, for supporting our efforts. I now invite you to review the detailed report.

Research

Pre-Exposure Prophylaxis (PrEP)

The World Health Organization (WHO) recommends pre-exposure prophylaxis (PrEP) in populations with an annual HIV infection incidence greater than

03%

The World Health Organization (WHO) recommends pre-exposure prophylaxis (PrEP) in populations with an annual HIV infection incidence greater than 3% (substantial risk), and in sub-Saharan Africa PrEP is prioritized for priority and high HIV risk populations. PrEP eligibility in general populations has not been well studied in sub-Saharan Africa. In study that we conducted in the RCCS, we found high rates of PrEP eligibility and associated HIV incidence.

Overall, 29% met at least one of the eligibility criteria. HIV incidence was significantly higher in PrEP-eligible versus non-PrEP-eligible participants (0·91/100 pys versus 0·41/100 pys; p<0·001), and independently higher in PrEP-eligible versus non-PrEP-eligible females (1·18/100 pys versus 0·50/100 pys; p<0·001). Among uncircumcised males, HIV incidence was significantly higher in PrEP-eligible versus non-PrEP-eligible (1·07/100 pys versus 0·27/100 pys; p=0·001). Implementing PrEP as a standard HIV prevention tool in generalized HIV epidemics beyond currently recognized high-risk key populations could further reduce HIV acquisition and aid epidemic control efforts.

High rates of PrEP discontinuation measured as any voluntary stopping of PrEP have been reported across sub-Saharan Africa. Effective adherence is being promoted, but there was little data on the dynamic nature of PrEP eligibility. In a population-based study conducted in the RCCS, we observed waxing and waning of PrEP eligibility. Discontinuation rates of SHR for PrEP eligibility were stable (ranging 34.9/100 pys to 37.3/100pys; p=0.207), while resumption reduced from 25.0/100 pys to 14.5/100pys (p<0.001). PrEP eligibility episodes lasted a median time of 20 months (IQR = 10–51). PrEP use should be tailored to the dynamic nature of PrEP eligibility. Preventive-effective adherence should be adopted for assessment of attrition in PrEP programs.

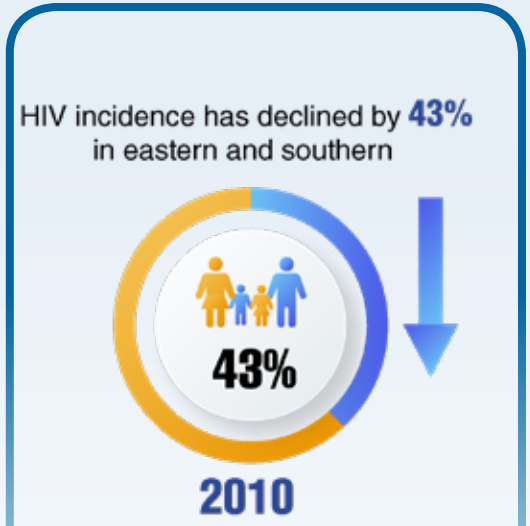
A client receiving ART medication at Mazinga HCII.

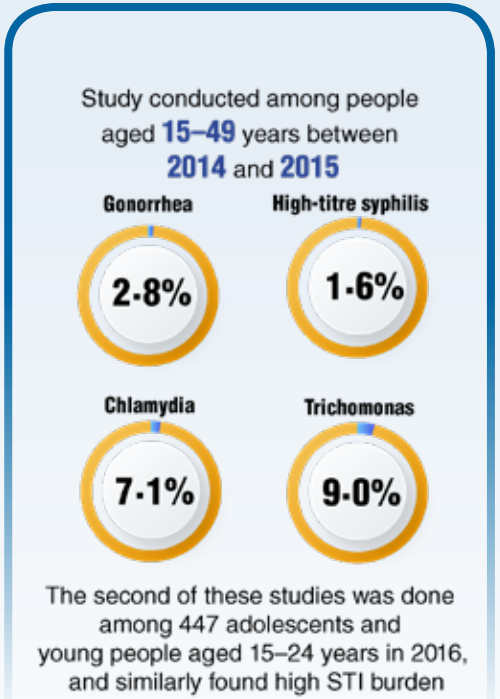
Sexually Transmitted Infection Prevalence Study (STIPS)

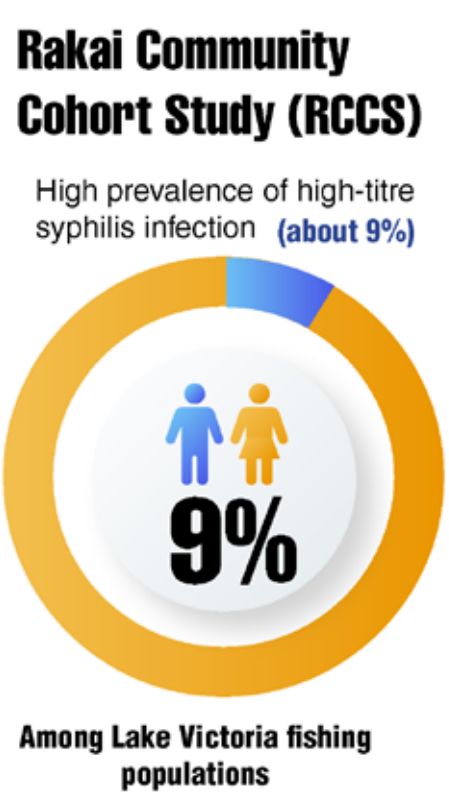
PI: Kate Grabowski, Joseph Kagaayi

Evidence before this study

Sexually transmitted infections (STIs) are associated with poor reproductive health outcomes and neonatal morbidity and mortality. Decades of previous research have shown that STIs are also strongly and consistently associated with higher HIV incidence and prevalence, including in sub-Saharan Africa, where the global burden of HIV is concentrated. Although HIV incidence has declined by 43% in eastern and southern Africa since 2010 with the scale-up of combination HIV prevention and treatment programmes, population-level data on STIs since widespread implementation of these programmes are rare. Over the past decade, data from facility-based settings, predominantly antenatal care clinics, and HIV clinical trials suggest that STI burden among African women who are pregnant and of reproductive age remains high. We searched PubMed, in English only, from inception to Jan 1, 2022, using search terms such as "population-level", "population-based", and "sexually transmitted infections" we identified only two comprehensive population-level studies on STIs (ie, including assessment of multiple STIs in addition to syphilis) conducted in sub-Saharan Africa since 2010, both of which were done in KwaZulu-Natal, South Africa before universal HIV treatment access. The first study was done among people aged 15–49 years between 2014 and 2015 and found high STI burden, with overall prevalence of gonorrhea of 2·8 %, chlamydia 7·1%, high-titre syphilis 1·6%, and trichomonas 9·0%. The second of these studies was done among 447 adolescents and young people aged 15–24 years in 2016, and similarly found high STI burden.







Added value of this study

We used primary data collected through the Rakai Community Cohort Study (RCCS) to measure prevalence of chlamydia, gonorrhoea, trichomonas, syphilis, and herpes simplex virus 2 (HSV-2) following mass scale-up of combination HIV prevention interventions in two East African communities with high HIV prevalence. Despite successful public health efforts to treat and curb HIV spread within these communities, non-HIV STI burden was extremely high with large numbers of asymptomatic STI infections. **We also found an extraordinarily high prevalence of high-titre syphilis infection (about 9%) among Lake Victoria fishing populations, at a prevalence arguably constituting a public health emergency.**

Despite achieving UNAIDS 95-95-95 HIV fast-track treatment targets with about 90% HIV viral load suppression, the burden of STIs was significantly higher among people living with HIV, including among pregnant women, underscoring a lack of effective integrated HIV and STI services.

To our knowledge, this is the first comprehensive population-level assessment of STI burden, including measurement of gonorrhoea, chlamydia, trichomonas, syphilis, and HSV-2, in an eastern Africa setting in more than a decade, and the first done in sub-Saharan Africa since universal HIV treatment programmes were implemented.

Implications of all the available evidence

Taken together, data from this population-level study of STI burden in Uganda and those from other sub-Saharan African settings suggest that STIs remain neglected diseases in sub-Saharan Africa. The absence of affordable STI diagnostics and poorly-integrated public health services stand as major barriers to reducing STI burden in the region.

Global investment in innovative approaches that simultaneously test and treat HIV and STIs within existing health infrastructure has the potential to substantially improve population health in Africa, such as integrated HIV and STI service programmes within the President's Emergency Plan for AIDS Relief programme. Controlling STI epidemics within Africa should be a global health priority given the important consequences of STIs for female reproductive and child health and the growing threat of antimicrobial resistance.

RCCS' Cissy Nalukwata receiving a certificate after successfully passing the Good Clinical Practices training.

RCCS team during a refresher training on Good Clinical Practices.

RCCS Intensify NCDs Research in the context of HIV Prevention Impact Surveillance

The Rakai Community Cohort Study (RCCS) has for decades made tremendous contributions to the understanding of the HIV epidemic. Thanks to the research participants and the community structures for continued partnerships extended all the way to 2022. Above and beyond the HIV research in the RCCS, we have previously reported on non-communicable diseases – which is a growing burden of disease in Sub-Saharan Africa (SSA). This is largely attributed to increasing life expectancy, urbanization and changes in lifestyle and diet across the continent.

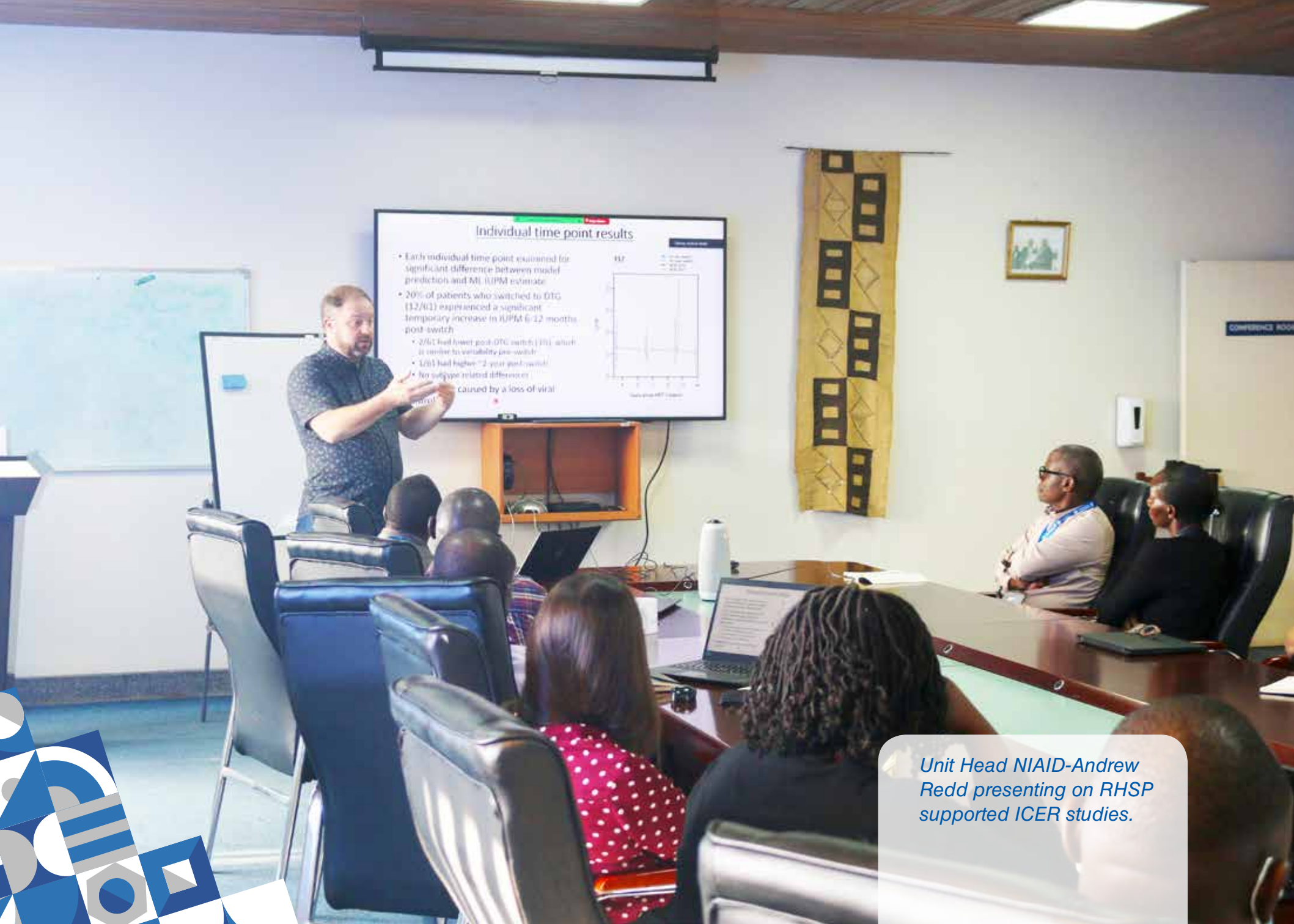
In 2022, we took further steps to describe key risk factors for cardiovascular disease and the ten-year risk for cardiovascular diseases and type II diabetes. We revealed that in this population, cardiovascular risk factors of obesity, abdominal obesity, hypertension, and dyslipidemia were found to be common, while hyperglycemia was less common. Ten-year risk for cardiovascular and type 2 diabetes mellitus risk was low. In a separate analysis by Mustapha A (2022) et al, we discovered that hypertension is common in rural Uganda among individuals with higher social economic status and appears to be mediated by the body mass index (BMI).

This year we reported that 9% of the RCCS study participants (n=18,062) were underweight, 68% were normal weight, approximately 17% were overweight, and 6% were obese. Therefore, 23% of all participants were overweight or obese. Approximately 24% of females were overweight and 11% were obese while approximately 9% and 1% of males were overweight and obese, respectively. The combined prevalence of overweight and obesity increased from 14% in 15–19-year-old females to 42% and 47% in females aged 30–39 and 40–49 years, respectively.

For males, the prevalence of overweight and obesity increased from 2% in 15–19-year-old males to 15% and 14% in males aged 30–39 and 40–49 years, respectively. In effect, whenever urban tendencies prevail regardless of rural or urban communities NCDs like hypertension will prevail. Healthy weight interventions are highly required to curb the silent by really NCD epidemic which is fast coming as the HIV epidemic recedes.

In a separate analysis we discovered that people living with HIV are presenting with a more favorable CVD risk factor profile, including Non-alcoholic fatty liver disease and electrocardiogram abnormalities, as compared to HIV-negative participants. There is however some evidence that arterial stiffness is more prevalent in people living with HIV aged 35 to 49. These analyses are limited by the historical RCCS upper age cap that was informed by the initial RCCS – HIV surveillance design that caps the HIV risk at 49 years. We are enthusiastic to continue looking at these data after we lifted the upper age cap.

To continue with understanding current and future risk for non-communicable diseases in this setting (which is fundamental for prevention), there is need to determine the right tools (risk scores). This year, in one our qualitative study to assess the suitability and acceptability of some of these globally applied tools, we reported that; the use of disease-specific local terms may be more appropriate than use of the NCD as an umbrella term in areas where there is no agreed local term. Physical activity is best defined in terms of daily routine or manual work, but notably, most participants did not count non-leisure physical activity when simply asked if they engage in physical activity. The consumption of fruits and vegetables is affected by seasons of availability and scarcity. In general, some of the global risk scores are generally suitable but it is important to localize key aspects, especially physical activity and taking seasonality into account for fruit and vegetable consumption.



Unit Head NIAID-Andrew Redd presenting on RHSP supported ICER studies.

ICER Studies

HERA Study

Initiation of antiretroviral therapy (ART) can lead to a short-term increase of herpes virus-related illnesses including genital herpes flares, higher likelihood of varicella zoster virus (VZV), cytomegalovirus (CMV) uveitis or other end-organ disease, and herpes simplex virus (HSV)-associated encephalitis. Herpesvirus reactivation upon ART initiation may be related to immune restoration disease of immune reconstitution inflammatory syndrome (IRIS), but the etiology is unclear. The Herpes Virus Reactivation Study (HERA) is investigating the biological mechanisms which result in viral reactivation and its impact on HIV disease.

One hundred ninety women initiating ART were enrolled and followed up for 1 year, all study visits were completed in October 2020. Laboratory investigations are ongoing with preliminary findings suggesting that Human Herpes Virus type 8 (HHV-8), the cause of Kaposi's Sarcoma, does not increase following ART initiation as we earlier observed with Herpes Virus type 2 (HSV-2). In collaboration with Dr. Irini Sereti at NIAID, we will also be reporting at CROI 2023 on the vaginal microbiome changes after women initiation ART.

Latent Reservoir Study

The major barrier to curing HIV infection is the persistence of HIV in latently infected resting memory CD4+ T cells. Previous work from the ICER Uganda team found that the latent viral reservoir (LVR) in our Ugandan population is over 3-fold smaller than that of a previously reported American population. This represents the first quantification of latently infected resting CD4+ T cells with replication competent virus in an ART treated, virally suppressed sub-Saharan African population. We expanded on this work to further examine this Ugandan population and found that women have a significantly smaller replication-competent LVR compare to Ugandan men. In addition, we identified unique immunological and clinical characteristics between the two sexes of treated Ugandans. In particular, we found that LVR size of men, but not women, was correlated with PD-1 expression. This work highlighted the need for expanded studies of women in HIV Cure work. This work is continuing with a detailed longitudinal analysis of changes in the reservoir and clonality in these individuals. These ongoing studies have identified a possible temporary increase in the replication competent LVR associated with the switch to Dolutegravir based ART. In addition, work by Dr. Edward Kankaka as part of his Fogarty funded post-doctoral fellowship, in collaboration with the ICER/NIAID and Western University teams, has performed a detailed dating analysis of the LVR in a subset of the cohort.

Researchers at RHSP, in collaboration with the IHSS/ICER Uganda, are part of the REACH Delaney HIV Cure consortium. As part of REACH, RHSP will continue to examine the latent reservoir cohort using novel reservoir monitoring technology developed through the consortium. In particular, REACH is designing an updated HIV subtype universal IPDA assay and plans to test this assay in Uganda.

A participant undergoing ECO tests in a mobile van.

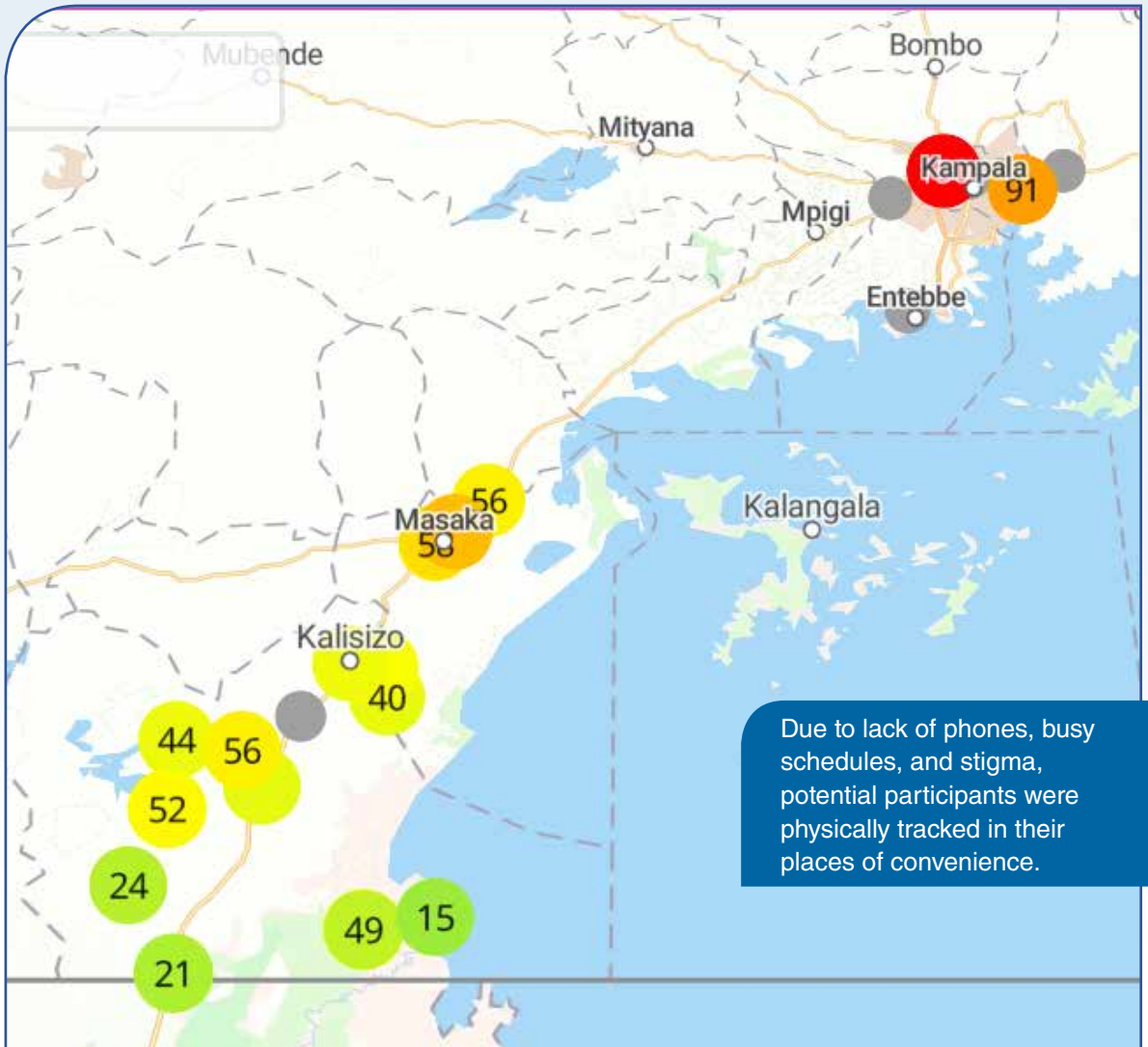
VICINITY Study

The Vicinity study follows individuals who migrate from the Rakai Community Cohort Study (RCCS) to urban areas including Kampala metropolitan and Masaka city. These individuals are contacted for interviews, blood samples, spirometry (lung function test), echocardiography (heart structure and function test), and air quality monitoring.

The study is aimed at;

- Characterizing HIV related and unrelated risk factors for cardiopulmonary non communicable diseases in rural-to-urban African cohort;
- Characterizing the impact of air pollution and moderating effects of HIV on cardiopulmonary clinical outcomes among rural-to-urban migrants;
- Assessing the utilization of HIV and cardiopulmonary non communicable diseases health services among migrants.

By the end of October 2022, the study had enrolled 1839 participants which was 61.3% of the overall target. A total of 1660 participants attempted spirometry and 1,098 passed on first attempt. The acceptance rate was greater than 99% of the eligible individuals. Echocardiography was done on a total of 1734 participants with abnormal findings identified in 7 participants. Personal and kitchen devices were given to 421 participants who were randomized for air quality monitoring. The team also installed 23 purple air devices and one E-sampler in different sites for ambient air quality monitoring. Below is a map showing some of the Purple-air monitors;



Due to lack of phones, busy schedules, and stigma, potential participants were physically tracked in their places of convenience.

The VICINITY Study: Epidemiology and Impact of the HIV, NCD, and Urbanization Syndemic in Africa (NIH R01)

There is a paucity of data on the impact of urbanization and air pollution on cardiopulmonary non-communicable diseases (CP-NCDs) among people with HIV (PWH) in Africa. In addition, little is known about HIV and CP-NCDs health service utilization patterns as people migrate to urban settings and how HIV and CP-NCDs care might be better integrated.

Longitudinal, population-level studies are needed to better guide future research, programs, and policies. The Rakai Community Cohort Study (RCCS) is an open, population-based cohort in south-central Uganda.

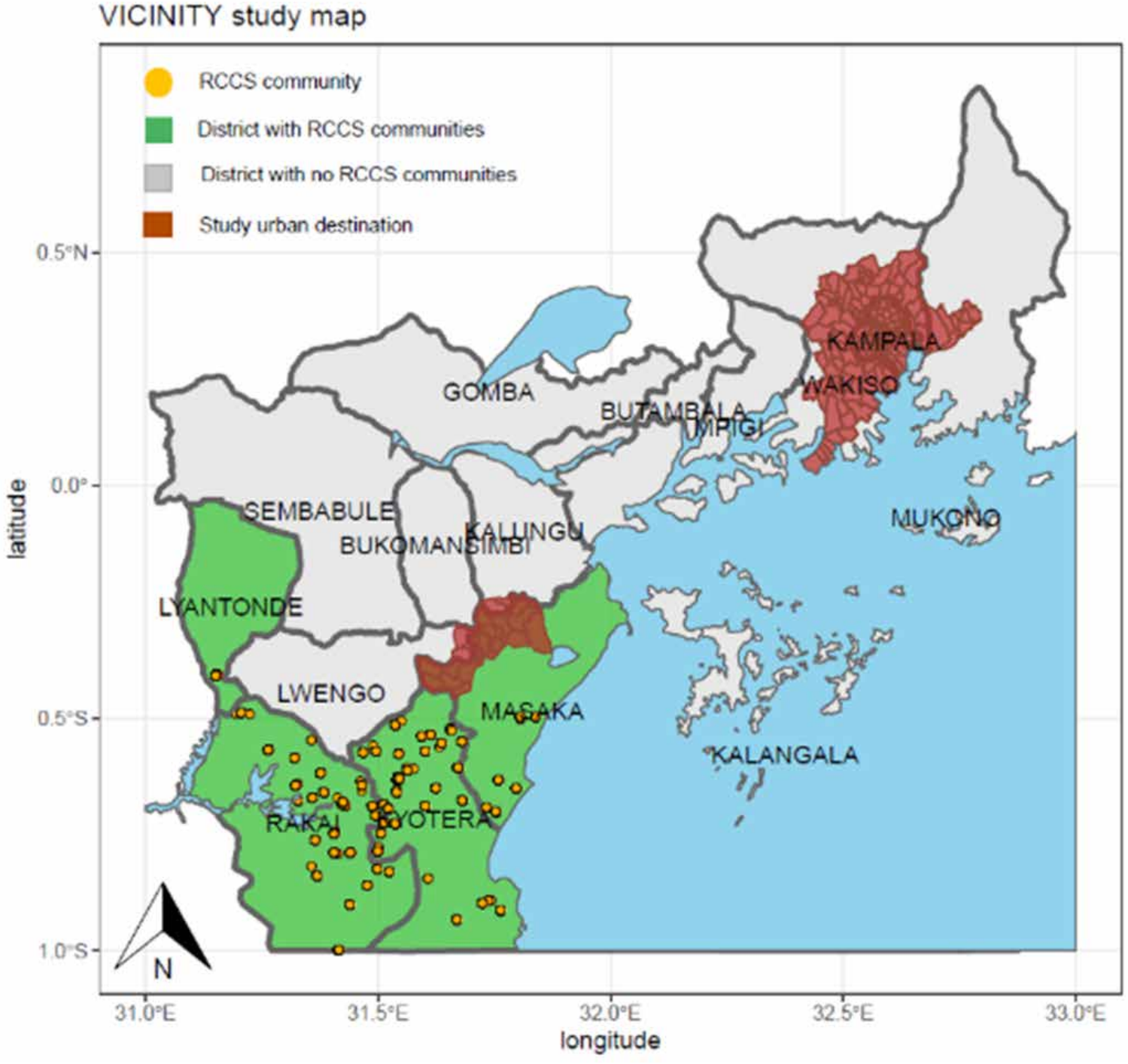
RCCS communities are non-urban and experience substantial out-migration of participants per survey round, including to two urban centers (Kampala and Masaka) in Uganda and to nearby, non-RCCS rural communities. With this unique infrastructure, RCCS offers a novel opportunity to conduct the VICINITY Study, a longitudinal, population-based research study on the HIV, CP-NCDs, and urbanization syndemic within a comprehensive health determinants framework.

The VICINITY study proposes to;

- Characterize HIV-related and -unrelated risk factors for cardiopulmonary non-communicable diseases in a novel Rural-to-Urban (R2U) African cohort;
- Characterize the impact of air pollution and moderating effects of HIV on cardiopulmonary outcomes among R2U migrants;
- Assess HIV and CP-NCDs health services utilization patterns among R2U migrants.

To our knowledge, this would be the first population-based, longitudinal cohort study of the HIV, CP-NCDs, and urbanization syndemic in Africa. Our unique ability to leverage a rural-to-urban cohort, the excellent research infrastructure, and novel will generate vital data needed for designing new research, interventions, and policies to combat the evolving HIV and CP-NCDs epidemic.

Over the first 2 years of the VICINITY study, RHSP has recruited over 2000 participants and conducted thousands of echocardiograms and spirometry tests. We have also installed air quality sensors throughout the study areas and completed hundreds of individualized air quality assessments. In addition, about 20,000 participants in RCCS have completed a CP-NCD survey module which should provide unique and impactful information.


VICINITY study map
RCCS community
District with RCCS communities
District with no RCCS communities
Study urban destination
KAMPALA
WAKISO
GOMBA
BUTAMBALA
MPIGI
MUKONO
SEMBABULE
KALUNGU
BUKOMANSIMBI
LYANTONDE
LWENGO
MASAKA
KALANGALA
RAKAI
KYOTERA
N
0.5°N
0.0°
0.5°S
1.0°S
31.0°E
31.5°E
32.0°E
32.5°E
33.0°E
latitude
longitude

RHSP team together with the CDC TDY team during a visit to Bufumira HCII in Bufumira island.

Hard-to-Reach Populations

Implications for Ending the AIDS Epidemic

The Rakai region in Uganda was the initial epicenter of the HIV epidemic in East Africa and continues to be a high burden area with an HIV prevalence of ~13%. Through the open, population-based Rakai Community Cohort Study (RCCS), we reported that combination HIV prevention (CHP) decreased population-level HIV incidence in Rakai by 42% from 1.17/100 person-years (pys) prior to CHP scale-up to 0.66/100 pys by 2016 (Grabowski et al. NEJM 2017).

Implications and limitations from this study raise two issues of global importance. First, mobile persons, typically away for work or school, and, rarely, refusers are a "hard-to-reach" population that is difficult to survey, reducing RCCS participation rates to ~62%. These populations may likewise be hard-to-reach for engagement in HIV services. Ongoing cluster-randomized HIV prevention trials and population-based HIV impact assessments have similar challenges of potential bias due to missing these hard-to-reach populations.

Second, despite reaching 59% male circumcision coverage and UNAIDS 90-90-90 goals with 75% viral suppression of all HIV-positive participants in RCCS, HIV incidence reductions were moderate and remained well above the estimated rate needed for HIV elimination (~0.1/100py). To address ongoing HIV transmission in the Rakai region, the PEPFAR program in which RCCS is nested recently began implementing additional CHP interventions:

(i) Pre-Exposure Prophylaxis (PrEP);

(ii) assisted Partner Notification; and

(iii) Same-day antiretroviral therapy (ART) with Universal Test and Treat (UTT). This environment provides a unique opportunity to address the following important questions:

(1) To what extent do hard-to-reach populations bias HIV coverage and incidence estimates?

(2) Why do some individuals continue to acquire HIV and from whom?

(3) Given hard-to-reach populations, can state-of-the-art CHP in a programmatic setting reduce HIV incidence to the levels needed for HIV elimination?

Our setting and research infrastructure strongly position us to answer these highly significant questions and inform current and future HIV prevention trials, evaluations, and programs. We thus propose a novel study with the following Aims.

Aim 1-We will first determine CHP coverage and HIV incidence among hard-to-reach persons using enhanced surveillance techniques.

Aim 2-We will then characterize ongoing sources of incident HIV infection through partner tracing, viral phylogenetics, and sexual network analyses.

Aim 3-Finally, we will determine if state-of-the-art CHP can engage hard-to-reach populations and reduce population-level HIV incidence to a level sufficient for HIV elimination by 2030. To our knowledge, no prior HIV population-based studies have empirically determined the potential effects of participation bias on HIV epidemiology and incidence due to non-inclusion of hard-to-reach populations. This timely study will uniquely address questions on hard-to-reach populations which are critical to understanding the true state of the epidemic, interpreting HIV prevention trials and cross-sectional studies, and informing prospects and pathways to ending the African HIV epidemic.

Over the first 3 years of this study we have managed to recruit over 1400 study participants, including about 300 sexual partners. These data will provide unique insights into the complicated HIV epidemic in Uganda and we are well on our way to completing study aims.

Social Behavioral Sciences team interacting with a client in the field.

Social Behavioral Sciences (SBS)

1. FISHING AND INLAND COMMUNITIES-UNDERSTANDING TRANSMISSION LINKAGES AND NETWORKS IN SOUTHERN UGANDA

PANGEA-HIV research has shown that people from general population communities in southern Uganda have introduced new HIV infections into high prevalence fishing communities on the Lake Victoria coast in Uganda. There is preferential migration of high HIV prevalence populations to Lake Victoria, particularly women, with lower levels of ART use.

We carried out a multi-site (RHSP and MRC sites) qualitative study to gain a deeper understanding into underlying factors that drive preferential migration of people living with HIV to high prevalence Lake Victoria fishing communities, and the reasons for lower ART use among these migrating populations.

Both organizations (where the two sites are located) are members of the PANGEA-HIV consortium. Sixty (60) men and women aged 18 and older were recruited from both sites between May and August 2021. 30% of these were already living with HIV and had recently migrated into the Lake Victoria fishing communities. The 70% were individuals who shared similar characteristics as the 30% (except for HIV status).

Results:

Reasons that forced high (HIV) prevalence individuals to migrate into fishing communities:

Push factors: Unfavorable conditions in former communities, which included stigma from the communities in form of social discrimination, sexual rejection, HIV labelling and violence.

Pull factors: factors specific to people living with HIV included normalization of HIV in fishing communities, fishing communities being considered as a safe haven, which accommodated all categories of people and where one could easily change social identity, access to healthy feeding on fish, easy access to sexual partners and availability of HIV care services. Other general factors included availability of employment opportunities, family/peer invitation, safe hideout for fugitives/criminals, women escaping from violent partners/family members and being an ideal place for fun/merry making.

Reasons for lower ART use among recent immigrants

This included fear of stigma (self and community), hesitation to disclose one's HIV positive status, fear for partner loss in case the partner found out participant's HIV positive status and fish availability that improves one's health. Other factors included lack of transport to immigrants' previous communities for ART refills or for picking transfer forms, fear of drug side effects in a situation of poor feeding and lack of knowledge or wrong perception about the available ART services.

Conclusion:

- Fishing communities are viewed as safe spaces for people living with HIV, thus attracting people living with HIV.
- There is need for continuous health education to help overcome the stigma that still exists in individuals and communities.
- The requirement of a transfer form before re-enrollment onto HIV care contributes to disengagement from care.
- There is need to simplify transfer processes and to create a national database to make transfers easier.

2. MASAKA REGION QUALITATIVE EVALUATION

With support from CDC through PEPFAR, RHSP is providing HIV prevention, care and treatment services in Masaka Region. With service beneficiaries and stakeholders, we conducted 36 Focus Group discussions and 60 Key informant interviews through which we discussed successes, challenges, quality of services and areas of improvement in the implementation of these services. FGD participants were beneficiaries of each implementation program area, i.e. VMMC, ART, PrEP, DREAMS, TB, OVC., HCT and PMTCT. On the other hand, Key informant interview participants (KIs) were purposively selected and these included; HIV/AIDS Focal Persons, District Health Officers, District HIV/AIDs CSO Representatives, Regional Implementing Mechanism Staff, Service Recipients, Community members, Community Health Workers, Local and religious leaders, Parents to program beneficiaries, and Peers in the program.

Results:

DREAMS

EFFECTIVENESS: Facilitation of economic empowerment, Economic empowerment for HIV prevention, Improved child-parent interaction

CHALLENGES: Unstable logistics supply (materials), Inability to access DREAMS services (insufficient safe spaces and poor trainer to trainee ratios), Partner influence, Safe spaces are sometimes not safe (pregnancies, marriages)

BEST PRACTICES: Establishment of DREAMS safe spaces in communities, **Networking** with other stake holders (district officials and CBOs), Use of standardized data collection tools (for beneficiaries), Flexible selection of courses (hair dressing, tailoring)

PROGRAM IMPROVEMENT: Project monitoring should start after graduation, Recruitment of DREAMS participants should be sustained, Creation of more safe spaces (more trainers and courses like health education), Enrolment of boys into the DREAMS program.

ART

EFFECTIVENESS OF THE PROGRAM: Improved access to HIV services, Health worker-client relationship, Increased protection against HIV (Health education, condom accessibility, PrEP, PEP), Promotion of adherence (adherence clubs, counselling, outreaches, VHTs and Peers distributing ART)., Giving birth to HIV free babies

CHALLENGES : Stigma (children and adolescents), Long waiting time and few health workers (esp. government facilities), Lack of transport to pick medicine/economic constraint, Partner influence, Poor facilitation of Healthcare Workers, Poor healthworker - client relationships

BEST PRACTICES : Use of community peers at the facility and in the community, Nutritional enhancement, Follow up with lost client (through peers), Flexible drug distribution program (facilities restocking each other, peers, outreaches), Continuous mentorship of health workers.

VMMC

EFFECTIVENESS: Creation of employment/income, Improved demand for VMMC services

CHALLENGES: Low turn-up of adult men, Low levels of awareness, Scanty service points

BEST PRACTICES: Client follow-up for care, Phone contacts and treatment, Transport facilitation and time compensation, Continuous HIV protective messages

PROGRAM IMPROVEMENT: Male involvement as champions.

PMTCT

EFFECTIVENESS: Reduction in birth of HIV+ babies HIV free generation.

CHALLENGES: Perceived stigma delay / never accessing service, Low levels of awareness, Transport constraints, Long waiting time (late arrival of health providers)

BEST PRACTICES: Routine practice, Health education, prevention, family planning, Training, monitoring and support supervision

PROGRAM IMPROVEMENT: Facilitation of support staff, Outreaches and sensitization, Increase on number of equipped facilities

HCT

EFFECTIVENESS: Restoration of hope, HIV prevention measures and counselling, Health worker-client relationship, Effective adherence counselling, Access to services Promotion of HIV testing

CHALLENGES: Lack of health education, Reluctance to test for HIV

BEST PRACTICES: Use of community members to trace for clients, Routine service provision, Promotion of confidentiality

PROGRAM IMPROVEMENT: Emphasis on health education

OVC

EFFECTIVENESS: Economic empowerment (IGAs, skills training), Educational support (Schoolfees and scholastic materials), Retention in program and adherence (good counselling, care, and treatment improved health and well being), Linkage to care, Provision of shelter.

CHALLENGES: Inadequate or delayed school supplies and funds, Poor linkage to services.

BEST PRACTICES: Economic empowerment and promotion of good health

PROGRAM IMPROVEMENT: More provision of basic needs(food & shelter) and animal feeds, Engagement of VHTs with OVC program, Raise awareness about program, Expansion of the OVC program to the larger population, Need to crosscheck OVC personnel

TB

EFFECTIVENESS: Improved health, TB Client follow-up

CHALLENGES: Limited compliance, Limited awareness about TB health services

BEST PRACTICES: TB clients follow-up strategy **(c**ontact tracing **and f**ollowing up missed appointments), TB Patients identification strategies (Cough monitors, VHTs and sputum tins at HC IIIs, Peer mothers and the 20,000= motivation, Identification through churches and mosques, Outreaches), Access to medicine (Drugs decentralized).

PROGRAM IMPROVEMENT: Raise awareness (community and new medics i.e. symptoms, cause, prevention and treatment), Improve on staff support (VHTs, TB expert clients/care taker)

PrEP

EFFECTIVENESS: Sustained partner relationship (discordant couples, disclosure), Improved PrEP acceptance **(**Supportive health providers), Increased service awareness and use **(**Especially key populations)

CHALLENGES: Low levels of service awareness (misconceptions of negative effects),, Self-stigma (due to resemblance to ART for HIV +s), Transport costs and long distance to the service centres .

BEST PRACTICES: Clients' follow-up, Convenient PrEP access (**a**lways available)

PROGRAM IMPROVEMENT: Change PrEP packaging (different from ART) as this has led to intimate partner violence, Boost sensitisation about PrEP, Take services closer to the people XXX

RHSP team testing TB in Muduuma Mpigi District

Aerial photo of kasensero fish landing site.

Hard to Reach Study

Hard to Reach is an observational study that studies hard-to-reach populations. These are people that are difficult to survey because they are frequently away, typically at work or school, or because they refuse to participate. For this study, we have several aims.

Aim 1 - We first identify hard-to-reach persons and create tracking forms for each participant with the individual's contact and location information. The team uses enhanced surveillance techniques, such as phone calls, home visits, and others, to track the individuals and attempt to enroll them in the study. With the information we obtain, we determine the combination of HIV prevention coverage and HIV incidence among these hard-to-reach persons.

Aim 2- We then track newly identified HIV incident cases of our study and their partners. We also track HIV-negative persons and their partners to use as controls. With this, we identify hard-to-reach participants that are ongoing sources of incident HIV infection and their sexual networks. This helps identify populations that are at high risk of HIV infection and can be targeted for CHP interventions.

Aim 3 - Finally, we will analyze the effects of CHP interventions and estimate HIV incidence trends, by including information from our Aim 1 and Aim 2. We will determine if state of the art CHP can engage hard-to-reach populations and reduce population-level HIV incidence to a level sufficient for HIV elimination by 2030.

Our team has been doing great work. For our **Aim 1**, so far, we have confirmed the eligibility and gathered the tracking forms for all sampled participants in 20 communities. We have completed our work in 16 communities, resulting in a total number of 1029 enrolled participants. Our work in 4 communities is still ongoing and we hope to start tracking participants in 2 more communities soon. We expect to have completed 20 communities by the end of the year.

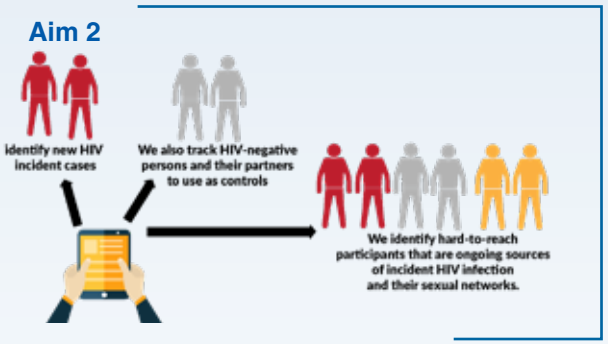


Table 1. Report of communities surveyed in study.

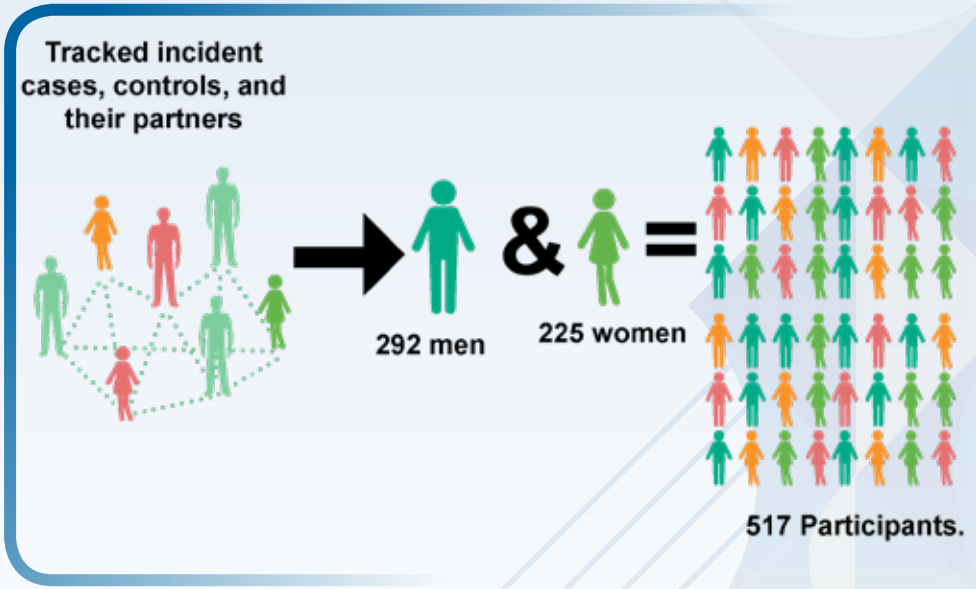
Community Number	Target	Enrollments	%	Community Status
07	40	40	100	Completed
08	32	32	100	Completed
106	63	63	100	Completed
058	9	9	100	Completed
094	8	8	100	Completed
056	14	14	100	Completed
391	21	21	100	Completed
108	35	35	100	Completed
034	54	54	100	Completed
089	22	22	100	Completed
040	84	84	100	Completed
038	335	335	100	Completed
033	16	16	100	Completed
002	45	45	100	Completed
016	20	20	100	Completed
107	30	30	100	Completed
770	53	53	100	Completed
771	98	80	81.6	On going
774	50	18	36	On going
057	19	17	89.4	On going
019	59	33	55.9	On going
602	85	0	0	Pending
062	14	0	0	Pending

For **Aim 2**, we have tracked incident cases, controls, and their partners. We have enrolled 225 women and 292 men, for a total of 517 participants. We hope that by the end of the year we will have enrolled all the cases and controls needed for the study and most of their traceable partners.

Table 2. Pooled data of incident cases, controls, and partners.

ALL			
NO. IDENTIFIED	SEX	ENROLLED	PENDING
321	Female	225	96
458	Male	292	166

Finally, in the future we will start **Aim 3**. With the findings of our Hard to Reach study we will provide important information to inform HIV elimination efforts.




KALANGALA HC IV
DONATED BY RHSP FUNDED BY PEPFAR THROUGH CDC
PEPFAR
CDC

RHSP and MOH health workers following up with lost client during a home visit.

Sstar Papers - 2022

Spindler EJ. "Child marriage" declines as social change? The influence of global priorities, social determinants and norms in changing adolescent marriages in southcentral Uganda, 1999-2018. Columbia University Dissertation: Accepted July 2022.

Despite the global push to 'end child marriage' over the last decade, there is limited research about how broader social and structural factors may be driving declines in adolescent marriage. This dissertation examined the policy, structural and social mechanisms that have contributed to declining adolescent marriage among adolescent girls in Rakai, Uganda.

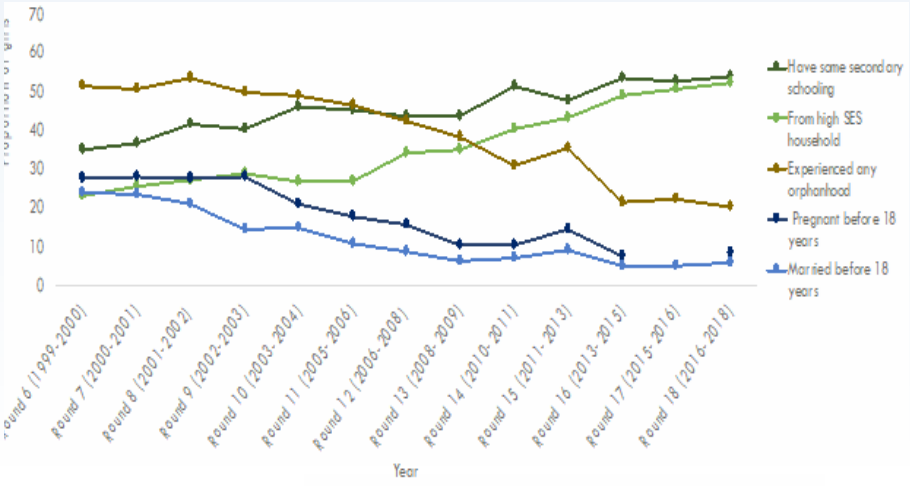
In Uganda, multiple factors influenced the national policy uptake of 'child marriage,' – defined as marriage under 18 years - including: 1. Consensus among Eastern and Southern African country leadership; 2. Uganda national data on child marriage; 3. The cultural and political appeal of child marriage as an issue of 'child rights', rather than one of 'sexuality,' and; 4. A coalescing of government leaders, academics, international non-governmental organizations (INGOs) and civil society organizations (CSOs) behind the issue.

In Rakai, Uganda, adolescent marriages and pregnancies substantially declined over the last 20 years, from 24% to 6%, and 28% to 8%, respectively, between 1999 and 2018, as a result of educational and economic improvements. Girls' secondary schooling was closely associated with lower risk of marriage and pregnancy. Declines in adolescent marriage between 1999 to 2018 were primarily attributed to pregnancy declines, but also improvements in education and to a lesser extent, SES.

In Rakai, secondary analysis of ethnographic data identified a 'normative transition', in courtship and marriage processes for young people. First, the HIV epidemic significantly weakened family structures, and in the process, courtship and marriage guidance previously provided by families and elders; second, the loss of land ownership in between generations has made marriage preparations more difficult for young people; and third, new social spaces outside the family home – including discos, mobile phones and schools - have expanded young people's romantic geographies prior to marriage. These changes have reduced the importance of the family institution in the marital decision-making process, while increasing young women's and men's autonomy in engaging in premarital sex, choosing their partners, and delaying marriage.

Taken together, these findings highlight the complexity of adolescent marriage. First, global and national 'child marriage' advocacy movements played a significant role in the uptake of child marriage as an issue of 'child protection', rather than one about 'sexuality' in Uganda. Declines in adolescent marriage and pregnancy appear to be closely linked, highlighting the importance of adolescent sexuality. Broader structural and social changes in Rakai have substantially changed adolescent norms around sex, courtship, and marriage, delaying age at marriage in between generations. However, young people are encountering new challenges as they enter adulthood and romantic relationships in the absence of pre-existing elder and familial systems and networks.

Figure 1 | Marriage, pregnancy, education, orphanhood, and SES among 15 to 17 year olds, 1999-2018 (n=6,998)



Basmajian, Alyssa, Philip Kreniske, Erin V. Moore, Esther Spindler, Fred Nalugoda, Neema Nakyanjo, William Ddaaki, John S. Santelli, and Jennifer S. Hirsch. (2022). Gendered access to digital capital and mobile phone ownership among young people in Rakai, Uganda. Culture, Health & Sexuality, 1-16.

This study examines how gendered access to digital capital—in the form of the social and economic resources needed to own and use a mobile phone—is connected to key adolescent and young adult milestones, such as securing employment and engaging in romantic relationships. We examined how access to mobile phones is gendered both for men and for women. Mobile phone ownership shapes economic opportunities, social connections, HIV risk and overall health and well-being. Young men had greater access to the benefits of mobile phone ownership, whereas young women's access to those benefits was impeded by covert and overt gendered mechanisms of control that limited access to digital capital. Findings suggest that mhealth initiatives, increasingly deployed to reach under-resourced populations, must take into account gendered access to digital capital.

Mobile phone ownership by age and gender, for all 2018 Rakai Community Cohort Study trading communities in Rakai, Uganda (N = 11,030, Women = 6,229).

Moore, E. V., Ddaaki, W., Hirsch, J. S., Chang, L., Nalugoda, F., & Santelli, J. S. (2022). "Sex is supposed to be naturally more pleasurable": Healers as providers of holistic sexual and reproductive healthcare in Uganda. Social Science & Medicine, 296, 114756.

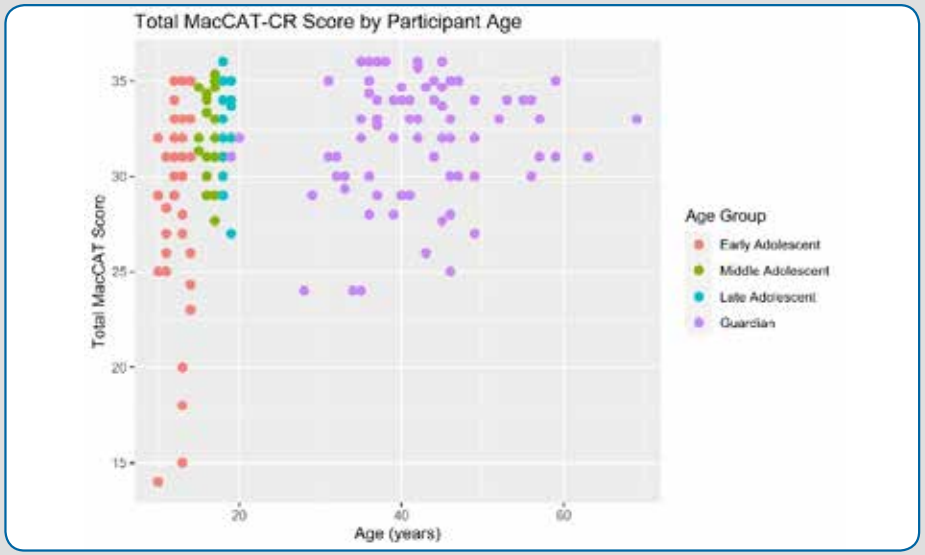
Medical anthropology typically emphasizes how plural medical systems encourage us to rethink health ontologies—the experience of health and illness. We explored the role of "healers," a term we use to encompass several different kinds of Traditional, Complementary, and Alternative Medicine (TCAM) providers, in the sexual and reproductive healthcare (SRH) of young people from southcentral Uganda, an HIV/AIDS epicenter. We describe three reasons that young people seek SRH from healers. First, they associate stigma, scarcity, and high costs with biomedical SRH. Second healers work across biomedical and non-biomedical therapeutic divides, prescribing herbs for sexually transmitted infections while simultaneously referring clients to biomedical HIV clinics. Third, healers provide counseling focused on pleasurable and economically-motivated sex. Because these therapies diverge from international and national HIV prevention messaging that frames non-marital and transactional sex in terms of danger and disease, healers' holistic approach to SRH may help to reconstitute the meaning, practice, and experience of "sexual health" in Uganda. This has important implications for improving global SRH programs and for understanding the continued appeal of TCAM more generally.

Kreniske P, Hoffman S, Ddaaki W, Nakyanjo N, Spindler E, Ssekyewa C, Isabirye D, Nakubulwa R, Proscovia N, Daniel L, Haba N, Maru M, Thompson J, Chen IS, Nalugoda F, Ssekubugu R, Lutalo T, Ott MA, Santelli JS. (2023). Capacity to consent to research among adolescent-parent dyads in Rakai, Uganda. The Journal of Pediatrics.

This study assessed the cognitive capacity of early, middle, and late adolescents, and their parents or guardians to provide informed consent to a population-based cohort study. Adolescents and parents were administered the MacArthur Competence Assessment Tool for Clinical Research (MacCAT-CR), a structured open-ended assessment; interviews were recorded and transcribed.

Early adolescents scored significantly lower ($p<.01$) than middle/late adolescents. Comparing adolescents to their parents, we observed no statistically significant difference in scores for middle and older adolescents. We found a statistically significant difference in scores between parents/guardians and early adolescents.

Our findings support the practice of having middle and late adolescents provide independent informed consent for sexual and reproductive health studies. Early adolescents may benefit from supported decision-making approaches.



Hoffman, S., Zhang, A., Nguyen, N., Tsong, R., Chen, Ivy S. MPH., Wei, Y., Lutalo, T., Nalugoda. F., Kennedy, Caitlin E., Grabowski, Mary K., Santelli, John S. (2022). Incident HIV Infection Among Young Men Associated With Female Sexual Partner Types Identified Through Latent Class Analysis, Rakai, Uganda. JAIDS

Sexual partner characteristics are important determinants of HIV acquisition, but little is known about partner types of young men in sub-Saharan Africa. Partner types were identified using latent class analysis. HIV incidence rates (IR) were calculated by partner-type combinations and individual-level risk adjusted incidence rate ratios (aIRR) relative to the lowest incidence type were estimated using Poisson regression with generalized estimating equations.

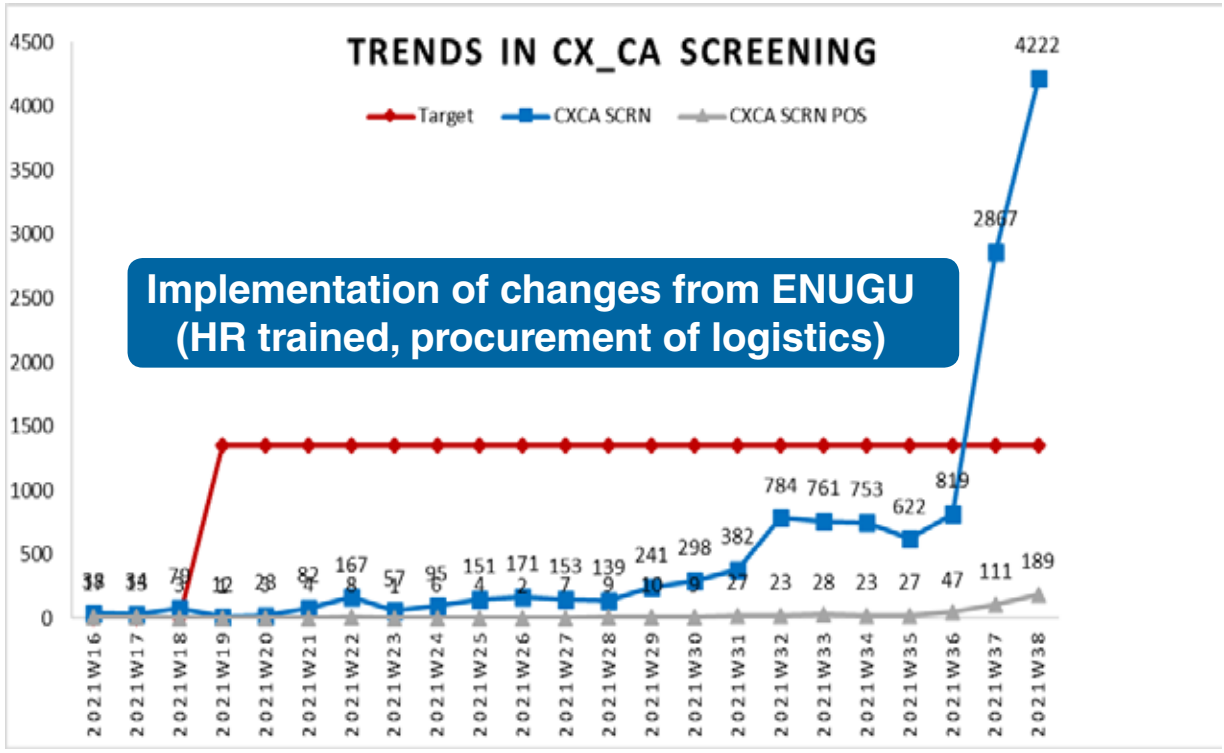
Three partner types were identified: Type A: non-cohabiting, student, medium duration partnerships; Type B: cohabiting, non-student, longer duration partnerships; and Type C: non-cohabiting, non-student shorter duration partnerships. Type C partners engaged in the most HIV-related risk behaviors. Many men (29%) had more than one partner type/round. IR overall was 9.8/1000PY. IR was 4.0 for men with Type A partners alone. Relative to them, IR for those with Type B partners alone was not significantly different. Men with Type C partners alone had higher risk (aIRR=3.2), as did men with >1 partner type, including men with both Type A and Type B partners (aIRR=6.3) and men with Type C and other partner types (aIRR=4.3).

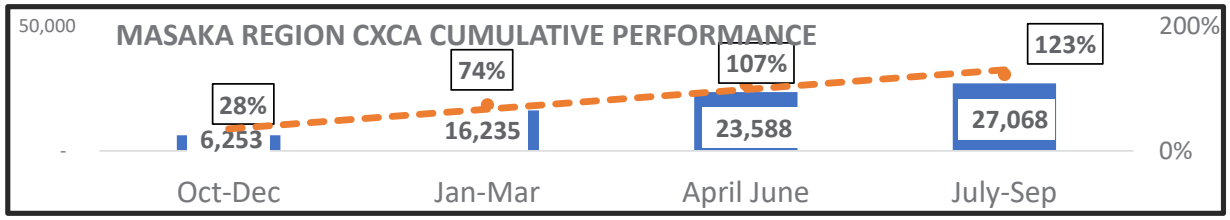
Partner-type combination was strongly associated with HIV incidence; type C partners and having more than one partner type were the riskiest patterns.

Programs

Care and Treatment

Impact of ENUGU model on Cervical Cancer Performance





Key objective

To improve Ca Cx screening from 28% in Q1 to > 95% in Q4.

Target population

women LHIV aged 25-49 years.

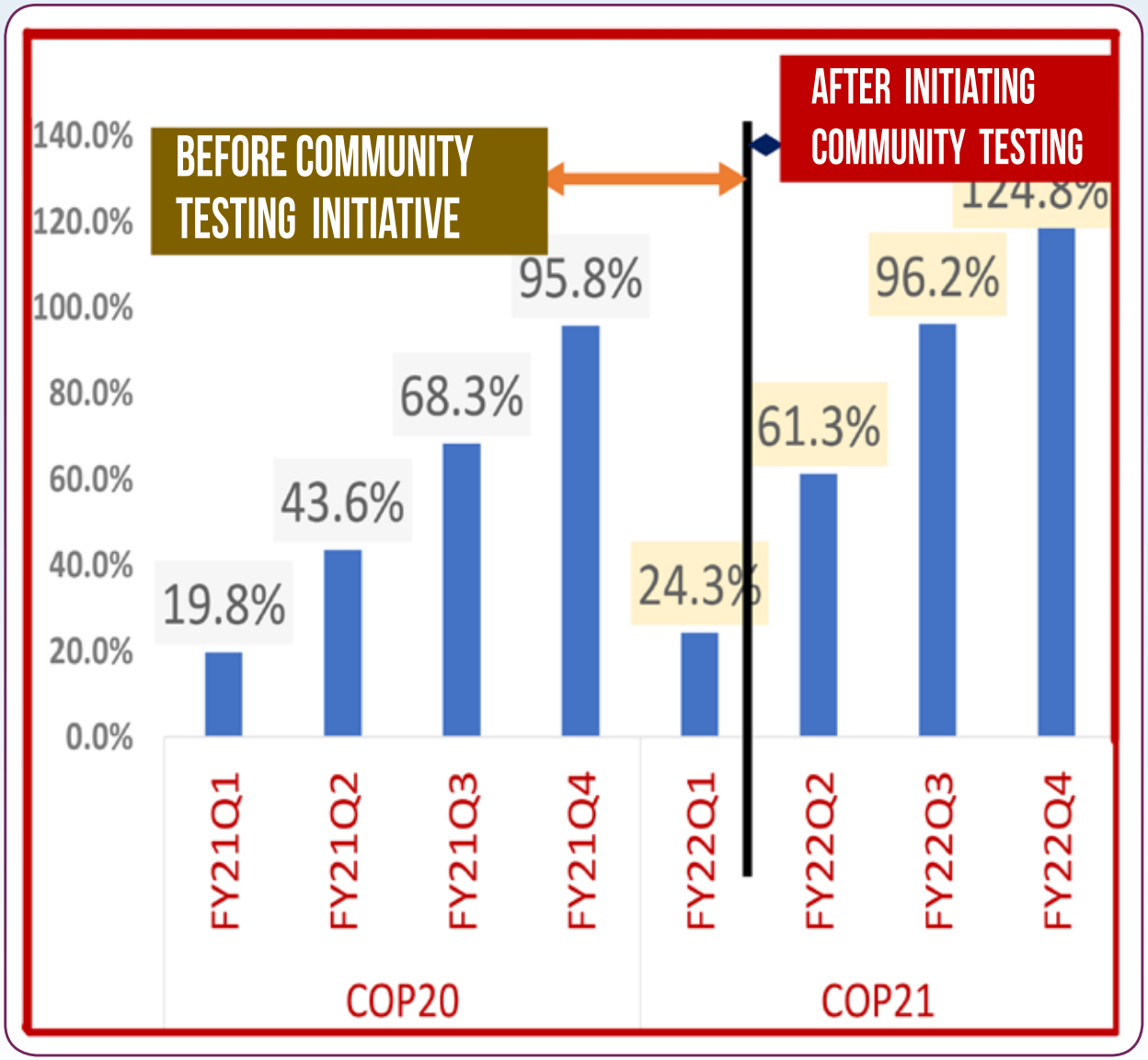
Key activities

Weekly breakdown of targets at facility level, Daily and weekly performance tracking, refresher training in Ca Cx screening, procurement of logistics such as speculums.

Key outcomes

As shown in the trend line performance improved from 28% in Q1 to 123% in Q4

COP 21 MASAKA REGION QUARTELY TB TREND PERFORMANCE



Objective

To improve TB case identification from 24% by end of Q1 to > 95% at Q4.

Target population

All social Contacts of TB patients and those with symptoms suggestive of TB at community level.

Key activities

Community TB case finding through SNS, supporting sample transportation from the community to the labs for testing, facilitating lab personnel for extra hours to analyze all the samples timely

Key outcomes

TB case identification improved from 24% in Q1 to 124% by the end of Q4.

COP 21 MASAKA REGION TPT PERFOMANCE

District	Targets	APRIL-8TH MAY	9TH MAY-8TH July	9th May to Sept 30th	TOATL	Gap	%ge Achieved
Bukomansimbi Distric	57	26	65	30	178	-121	312%
Butambala District	176	74	154	117	521	-345	296%
Gomba District	194	94	128	154	570	-376	294%
Kalangala District	154	81	274	244	753	-599	489%
Kalungu District	115	75	144	189	523	-408	455%
Kyotera District	304	254	352	412	1322	-1018	435%
Lwengo District	631	131	662	298	1722	-1091	273%
Lyantonde District	284	77	103	131	595	-311	210%
Masaka City	30	24	57	93	204	-174	680%
Masaka District	71	43	63	69	246	-175	346%
Mpigi District	450	165	211	235	1061	-611	236%
Rakai District	155	94	118	135	502	-347	324%
Sembabule District	125	95	190	185	595	-470	476%
Grand Total	2746	1233	2521	2292	8792	-6046	320%

Objective

To improve TPT performance from 28% at end of Q2 to >95% at the end of Q4.

Target population

All PLHIV without active TB disease.

Key activities

line listing of clients that were eligible and initiating them on TPT through the last mile Campaign, integrating TPT refills into other activities, peer home drug delivery.

Key outcome

Improvement in TPT performance from 28% to 320% against the actual denominator of 2746.

RHSP's David Okello with METS coaches during collaborative supervisory visits at Masaka Police Health Centre.

Continuous Quality Improvement highlights

National Quality Improvement Collaboratives for PrEP and TB/HIV Clinical Care Cascade

Rakai Health Sciences Program supported 26 sites to pilot the National PrEP QI collaborative and 125 sites implemented National TB/HIV QI Collaborative. These collaboratives were implemented with support from MoH and METS. The district coaches visited health facilities monthly with support from regional coaches hence improvement in various indicators as in graphs below. Onsite coaching and mentorship by MoH and METS Regional coaches reinforced learning.

Proportion of PrEP eligible clients initiated on PrEP												
Month	**Jan-22**	**Feb-22**	**Mar-22**	**Apr-22**	**May-22**	**Ju-2022**	**Jul-22**	**Aug-22**	**Sep-22**	**Oct-22**	**Nov-22**	**Dec-22**
Number of eligible clients initiated on PrEP in a month (N)	946	952	1086	1530	769	990	551	624	346	651	752	318
Total number eligible for PrEP in a month (D)	1034	1056	1284	1752	949	1087	648	679	371	672	779	326
Proportion of PrEP eligible clients initiated on PrEP (%)	91%	90%	85%	87%	81%	91%	85%	92%	93%	97%	97%	98%

Percentage of OPD attendees screened for TB during the month												
Month	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Ju-2022	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Number of OPD attendees screened for TB during the month (N)	83301	74245	72483	81882	89954	107523	107867	80620	85026	99519	88691	55008
Number of clients attending OPD during the month (D)	120076	101194	98330	104097	111361	125014	122305	90248	94751	113915	98099	60136
Percentage of OPD attendees screened for TB during the month (%)	69%	73%	74%	79%	81%	86%	88%	89%	90%	87%	90%	91%

District Learning Sessions

The district quality improvement learning sessions have also been the avenue for cross-learning among health facilities, following the best practices that each health facility presents based on the identified gaps that they identified and successful strategies that they implemented to address the gaps. Rakai Health Sciences Program has supported the 12 districts in Masaka region to conduct quarterly learning sessions to facilitate cross-learning.

DREAMS girls making books for sale at a safe-space in masaka

DREAMS exhibition stall during the masaka Carnivore.

DREAMS QI Collaboratives

Rakai Health Sciences Program implemented the DREAMS Quality Improvement Collaboratives with oversight and support from Ministry of Health, USAID RHITES – North, Acholi Activity and Monitoring and Evaluation Technical Services (METS). The collaborative was piloted in 19 parishes in 9 districts and Masaka City. Through the collaborative, the capacity of coaches (subcounty coordinators), AGYWS representatives and DREAMS district technical officers was built resulting in establishment of the community quality improvement committees where the AGYWS were part. This also helped in inclusion of AGYWS in decision making regarding services pertaining to fellow AGYWS as a result it helped to increase the number of eligible AGYWS initiated on PrEP as in the graph below.

Proportion of PrEP eligible AGYW (15-24) initiated on PrEP												
Month	**Jan-22**	**Feb-22**	**Mar-22**	**Apr-22**	**May-22**	**Ju-2022**	**Jul-22**	**Aug-22**	**Sep-22**	**Oct-22**	**Nov-22**	**Dec-22**
No. of PrEP eligible AGYW (15-24) initiated on PrEP (N)	26	78	94	128	145	201	213	225	210	36	106	87
No. of PrEP eligible AGYW (15-24) (D)	95	188	264	297	384	421	386	404	323	55	124	112
Proportion of PrEP eligible AGYW (15-24) initiated on PrEP (%)	27%	41%	36%	43%	ww	48%	55%	56%	65%	65%	85%	78%

The 9th National Annual Quality Improvement Conference that was held at Munyonyo Commonwealth Resort with the theme *Supervision, Monitoring, Coaching, and Mentorship for a Resilient Health System, The role of QI*. Rakai Health Sciences Program had four successful abstracts considered for the conference and a team of 6 delegates attended the conference. Two oral and two poster presentations were made on different areas.

Mugerwa Abdul – Regional Coach Masaka District and City

Title: Focusing on data collection to improve accountability for health outcomes in Masaka District/City

Summary: Collaboratives have greatly improved various indicators through data collection, coaching and mentorship to facility teams so that sustainability is achieved even without external support. Teamwork at all levels is still paramount if we are to embrace and sustain Quality improvement with focus on data collection and use.

Simon Peter Kimera – Clinician Rakai Health Sciences Program ART- Clinic

Title: Tracking Presumptive TB case identification at Out-patient Department of Rakai Health Sciences Program ART-Clinic Kyotera District.

Summary: Continuous medical education to health workers and peers, Health Education to clients, use of cough monitor teamwork among clinic staffs and proper documentation was key to improvements in presumptive TB case identification.


MY LIFE MY CHOICE

CDC and RHSP team during a field visit to Nakateete HCII in Lwengo district.

Health Systems Strengthening

Ensuring availability of drugs & commodities for HIV positive clients: In order to accelerate epidemic control in the Masaka region districts of Mpigi, Gomba, Butambala, Sembabule, Bukomansimbi, Kalungu, Lyantonde, Lwengo, Masaka, Rakai, Kyotera and Kalangala, RHSP continuously works with MoH through NMS, JMS, the different district local government health teams and facilities to ensure commodity availability for the clients including quantities for multi – month drug distribution (MMD). Order tracking and fulfilment was done for the commodities resulting in good order fill rate shown below:

Commodity	Quantity ordered	Quantity received	% fill rate
Abacavir/Lamivudine (ABC/3TC) 120mg/60mg	1540	1727	112%
Abacavir/Lamivudine (ABC/3TC) 600mg/300mg	190	194	102%
Abacavir/Lamivudine/Dolutegravir (ABC/3TC/DTG) 600mg/300mg/50mg	1800	1518	84%
Zidovudine/Lamivudine (AZT/3TC) 300mg/150mg	490	555	113%
Zidovudine/Lamivudine (AZT/3TC) 60mg/30mg	896	796	89%
Determine HIV 1/2 test	41624	36100	87%
Dolutegravir (DTG) 10mg	3642	3500	96%
Dolutegravir (DTG) 50mg	4927	5122	104%
HIV 1+2, Stat-Pak HIV 1/2 Tests	3355	2990	89%
HIV 1/2, SD Bioline HIV 1/2 3.0 Tests	900	871	97%
HIV 1/2, SD Bioline HIV/Syphilis Duo Tests	11975	10567	88%
Serum Crag tests	10133	10240	101%
Determine TB LAM Antigen Test	2517	3166	126%
Tenofovir/Lamivudine/Dolutegravir (TDF/3TC/DTG) 300mg/300mg/50mg (Pack of 30)	17943	17720	99%
Tenofovir/Lamivudine/Dolutegravir (TDF/3TC/DTG) 300mg/300mg/50mg (Pack of 90)	9041	9423	104%

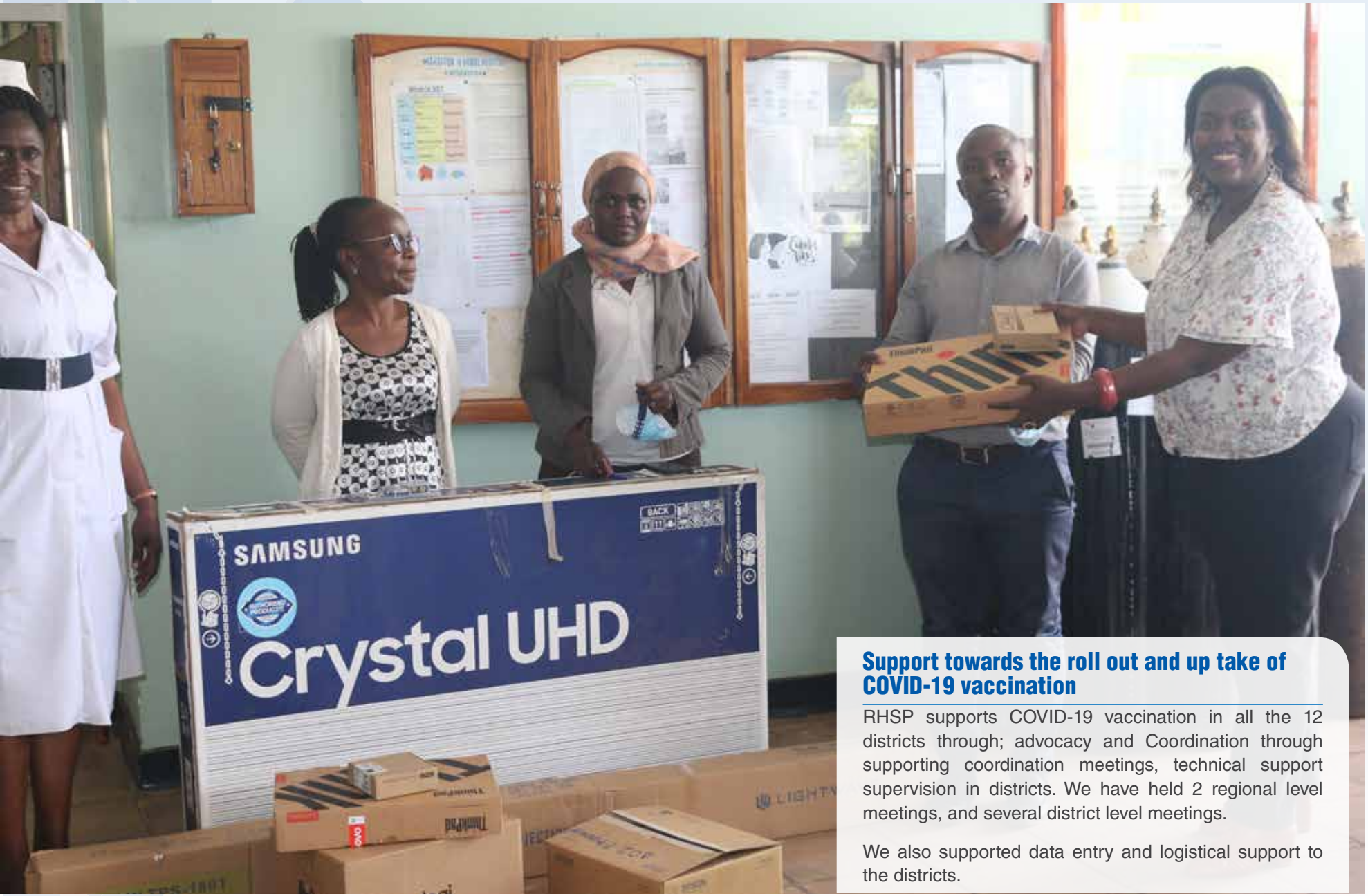
NMS supplies focused on GoU supported facilities and JMS & Beyond logistics PNFP and VMMC & IPC commodities.

Training Covid-19 Champions in Maria Flo Masaka

Infection, Prevention & Control: On 1st of November 2022, the MRRH received a positive Sudan Ebola virus disease result for a client that was admitted there. NH, a 23 year.old female, a resident of Kabowa, Kampala, and a housewife had traveled to Masaka on 27th October 2022 with a Taxi and stayed with her relatives; a family of 3 people in Kimanya A LC1 Masaka. She was 3 months pregnant and had complained of stomach pain which prompted her mother to request her to come to Masaka. Unfortunately, she got an abortion while in Masaka, bleeding from several openings on her body forces her to go to Masaka RRH on 31st October 2022 for support using a boda boda where the sample was collected upon arrival. On confirming EVD positive results, the patient was transferred to Entebbe RRH for treatment but over 162 contacts were listed, fortunately, all the contacts accessed and tested turned out negative and were discharged.

RHSP supported the response activities working together with other partners including WHO, JHPEIGO, UNICEF, MSF and PEPFAR global health above site partners Baylor – Uganda and IDI.

Activities included coordination meetings, Infection Prevention and Control assessments & mentorship and training of health workers at facilities, Procurement and distribution of PPE, hand.



Support towards the roll out and up take of COVID-19 vaccination

RHSP supports COVID-19 vaccination in all the 12 districts through; advocacy and Coordination through supporting coordination meetings, technical support supervision in districts. We have held 2 regional level meetings, and several district level meetings.

We also supported data entry and logistical support to the districts.

An Ora quick HIV self test kite

Other Preventions

HIV self-testing (HIVST): It is a process in which a person collects his or her own specimen (oral fluid or blood) and then performs a test and interprets the result often in a private setting either alone or with someone he or she trusts. HIVST is offered as an additional approach to HIV Testing Services in Masaka region and used as a screening test.

Objective: To promote Access to and create demand for HIV testing services among unreached population by existing services**.**

Target Population: Men/partners of pregnant and breast-feeding women attending Antenatal Care but may not find time to walk to the facility for an HIV test, Partners of Female sex workers, adolescents, and other priority population groups.

During January to December 2022 period, RHSP distributed **125,711** HIVST kits thus improving access to HIV testing services in underserved population groups.

CDC team led by Dr Lisa Nelson interacting with people who use drugs that were being supported by RHSP.

Health workers processing a client for recency testing in Mazinga island.

Recency Testing

Recency Testing is the testing for HIV infection that was acquired within the past 12 months

Objectives

Monitor trends in the prevalence of "recent" infections among all newly diagnosed HIV infections by demographic, risk characteristics and identifying geographic locations associated with recent infections to inform prioritization of prevention interventions.

Target population

All newly identified HIV positive individuals aged 15 years or older.

During January to December 2022 period, RHSP provided HIV testing services to **196,340** individuals, identified **7076** new HIV infections, and provided recency to **5156** of which **599** were recent HIV infections. Targeted HTS, risk reduction counselling and combination prevention strategies such as Pre-Exposure Prophylaxis, Condom distribution were provided to eligible individuals in locations where recent infections were identified.

DISTRICT	HTS_SELF	HTS_TST	HTS_POS	HTS_RECENT		
	Jan to Dec 2022	Jan to Dec 2022	Jan to Dec 2022	Long term	Recent Infections	Jan to Dec 2022
Bukomansimbi Distric	4956	7945	325	111	14	125
Butambala District	5104	6112	259	230	41	271
Gomba District	5673	14566	519	412	32	444
Kalangala District	6903	14004	693	461	79	540
Kalungu District	9783	15264	566	264	38	302
Kyotera District	27653	29443	996	615	150	765
Lwengo District	11051	20734	692	466	42	508
Lyantonde District	4457	17944	652	306	32	338
Masaka District	7683	6041	232	167	16	183
Mpigi District	15797	26661	970	602	58	660
Rakai District	12895	22221	469	393	50	443
Sembabule District	13756	15405	703	530	47	577
TOTAL	**125711**	**196340**	**7076**	**4557**	**599**	**5156**

The table shows number of HIV tests, those reached through self testing, newly identified HIV positives, and recency tests done from January to December 2022.

Infrastructure

RHSP Laboratory

1. Had a surveillance assessment by SANAS (Accreditation body) on 8th March 2022. This assessment checks for compliance with ISO 15189 which medical laboratory subscribe to for accreditation. The outcome of this assessment was good and RHSP laboratory maintained its accreditation status.
2. Secured a new chemistry machine courtesy of NIH, installed on the 03rd November 2022 and staff trained on its operation. With this machine laboratory is ready to efficiently support studies and clients in chemistry tests.

RHSP's Richard Muwanika delivering motorcycles to Rakai Hospital's Medical Superintendent.

Lab Regional Activities

RHSP's Richard Muwanika handing over a motorcycle to Lwengo district health officer Dr Moses Kafumbe.

In FY2022, RHSP supported 115 health facility Laboratories across 12 districts of greater Masaka region. Out of the 115 supported Laboratories, 3 were a centre of excellence Laboratories (TASO Masaka, RHSP ART clinic Lab and Uganda Cares Lab in Masaka), 10 were hub Labs, strategically located to serve as referral laboratories for approximately 20 to 30 health facilities within a radius of about 40 kilometers. In FY2022, RHSP received 9 brand new motorcycles from National Health Laboratory Department (NHLD), the technical Laboratory arm for ministry of Health. The motorcycles were provided to replace nine 9 of the old motorcycles to enhance patient sample referral from the peripheral health facilities (spokes) to the hub Laboratory for specialized analysis and return of results to the facilities. The new motorcycles were allocated to Lyantonde hospital, Lwengo HC IV, Masaka RRH, Rakai hospital, Sembabule HC IV, Gombe hospital, Mpigi HC IV and Kalangala HC IV hub Laboratories.

As part of RHSP's efforts to strengthen health systems for delivery of sustainable high-quality care and Continual Quality Improvement, RHSP contracted A Global Quality Consultants (AGQC) to provide specialized Laboratory trainings for 6 Systems Courses: ISO 15189:2012, Management Review, CAPA, Internal Laboratory Auditing, Statistical Process Control, Mentorship Courses for nine (9) Laboratory technical Field Officers and one (1) Laboratory staff from Rakai district local government. The course was customized as a long-term solution for Laboratory Systems Strengthening and it addressed challenges encountered during facility-based mentorships in Laboratory Quality Management Systems (LQMS) and how to improve the provision of quality Laboratory testing services for accessible comprehensive HIV/AIDS/TB services in the 12 districts of greater Masaka. The training aimed at building capacity of RHSP Laboratory frontline-personnel with Quality Management Systems tailored to support sustenance for its efforts in laboratory practice in the region.

Health workers testing functionality of EMR system during the launch in Kalangala island.

EMR Infrastructure

To strengthen health service delivery, RHSP with funding from CDC Uganda have implemented a digital health information system in partnership with Ministry of Health called Electronic Medical Records System (EMR). This support includes investment in computers and internet infrastructure, plus training of a workforce at heath facilities where this system is functional.

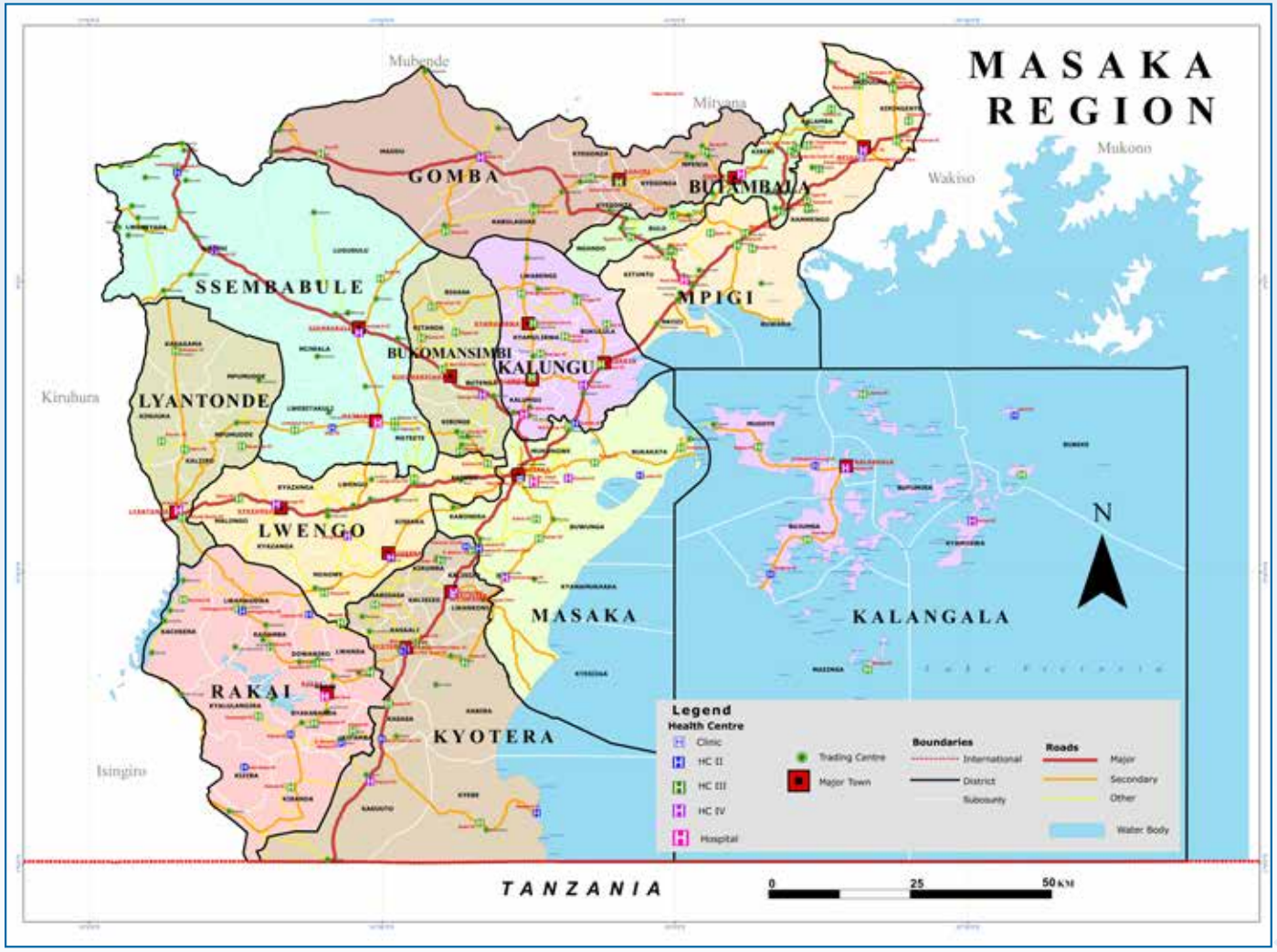
This system is aimed at achieving HIV/TB epidemic control and has been rolled out at various health facilities in the 12 districts of Masaka region. EMR platform holds substructures for point of care, data capture platforms, internet connectivity and user interfaces.

COVID-19 reshaped and redefined how we communicate and network and geared us towards predominant virtual communication. As a way of improving coordination & delivery of HIV services, RHSP provided equipment to support virtual communication between the DHO (District Health Officer) offices, facilities and other stakeholders.

Present at various health facilities is a footprint of Local Area Networks (LANs) with internet provision, laptops, jabra speakers, PTZ cameras, projectors and projector screens. All the 12 districts in Masaka region are beneficiaries of these collaborative tools which have eased communication between health workers.

Launch of EMR system in Maddu Health Center IV

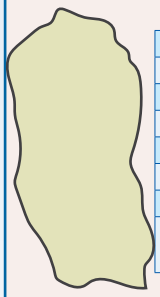
Masaka region extracting facilities with functional EMR system.



Gomba

Kanoni HC III	HC III
Kifampa HC III	HC III
Kisozi HC III	HC III
Kyayi HC III	HC III
Maddu HC IV	HC IV
Mamba HC III	HC III
Mpenja HC III	HC III
Rapha Medical HC III	HC III
Buyanja (Gomba) HC II	HC II
Ngomanene	HC III

Bukomansimbi



Bigasa HC III	HC III
Butenga HC IV	HC IV
Kagoggo HC II	HC II
Kigangazzi HC II	HC II
Kisojjo (Kibinge) HC II	HC II
Kitanda HC III	HC III
Mirambi HC III	HC III
St. Mary's Maternity & Nursing Home	HC III

Lwengo

Katovu COU HC III	HC III
Kiwangala HC IV	HC IV
Kyazanga HC IV	HC IV
Kyetume HC III	HC III
Lwengo HC IV	HC IV
Lwengo Kinoni Govt HC III	HC III
Nanywa HC III	HC III
Kakoma HC II	HC II

Sembabule

Busheka (Sembabule) HC II	HC II
Kyabi HC III	HC III
Lwebitakuli Gvt HC III	HC III
Lwemiyaga HC III	HC III
Makoole HC II	HC II
Mateete HC III	HC III
Ntete HC II	HC II
Ntuusi HC IV	HC IV
Ssembabule HC IV	HC IV
Sembabule Kabaale HC II	HC II

Kalungu

Bukulula HC IV	HC IV
Kabaale HC II	HC II
Kasambya (Kalungu) HC III	HC III
Kiragga HC III	HC III
Kiti HC III	HC III
Kalungu HC III	HC III
Kyamulibwa HC III	HC III
Lukaya Health Care Center/ Uganda Cares HC II	HC II

Lyantonde

Kabatema HC II	HC II
Kabayanda HC II	HC II
Kaliiro HC III	HC III
Kasagama HC III	HC III
Kinuuka HC III	HC III
Lyakajura HC III	HC III
Lyantonde Hospital	Hospital
Lyantonde Muslim HC III	HC III
Mpumudde HC III	HC III

Kalangala

Bubeke HC III	HC III
Bufumira HC III	HC III
Bukasa HC IV	HC IV
Bwendero HC III	HC III
Jaana HC II	HC II
Kachanga Island HC II	HC II
Kalangala HC IV	HC IV
Kasekulo HC II	HC II
Lujjabwa Island HC II	HC II
Lulamba HC III	HC III
Mazinga HC III	HC III
Mugoye HC III	HC III
Mulabana HC II	HC II
Ssese Islands African Aids Project	HC II

Butambala

Bulo HC III	HC III	Butambala
Epi-Centre Senge HC III	HC III	Butambala
Gombe Hospital	Hospital	Butambala
Kitimba HC III	HC III	Butambala
Kyabadaza HC III	HC III	Butambala
Ngando HC III	HC III	Butambala

Masaka

Bukakata HC III	HC III
Bukeeri HC III	HC III
Bukoto HC III	HC III
Kamulegu HC III	HC III
Kiyumba HC IV	HC IV
Kyanamukaaka HC IV	HC IV
Buwunga HC III	HC III
Masaka Police HC III	HC III
Mpugwe HC III	HC III
Nyendo HC II	HC II
TASO Masaka Special Clinic	HC II

Mpigi

Bujuuko HC III	HC III
Bukasa HC II	HC II
Bunjako HC III	HC III
Butoolo HC III	HC III
Buwama HC III	HC III
Buyiga HC III	HC III
DONA CARNEVALE MEDICAL	HC III
Fiduga HC III	HC III
Ggolo HC III	HC III
Kampiringisa HC III	HC III
St. Elizabeth Kibanga Ihu HC III	HC III
Kiringente Epi Centre HC II	HC II
Kituntu HC III	HC III
Mpigi HC IV	HC IV
Muduuma HC III	HC III
Nabyewanga HC II	HC II
Nindye HC III	HC III
Nsamu/Kyali HC III	HC III
Sekiwunga HC III	HC III

Kyotera

Lukaya HC III	HC III
MRC Kyamulibwa HC II	HC II
Kabira (Kyotera) HC III	HC III
Kabuwoko Govt HC III	HC III
Kakuuto HC IV	HC IV
Kalisizo Hospital	Hospital
Kasaali HC III	HC III
Kasasa HC III	HC III
Kasensero HC II	HC II
Kayanja HC II	HC II
Kirumba HC III	HC III
Kyebe HC III	HC III
Lwankoni HC III	HC III
Mitukula HC III	HC III
Mutukula HC III	HC III
Nabigasa HC III	HC III
Rakai Health Sciences Program Clinic	HC II

Rakai

Buyamba HC III	HC III
Byakabanda HC III	HC III
Kacheera HC III	HC III
Kibaale HC II	HC II
Kibanda HC III	HC III
Kifamba HC III	HC III
Kimuli HC III	HC III
Kyalulangira HC III	HC III
Lwakalolo HC II	HC II
Lwamaggwa Govt HC III	HC III
Lwanda HC III	HC III
Rakai Hospital	Hospital
Rakai Kiziba HC II	HC II

Data Mart

RHSP with support from NIH ICER operates a data infrastructure which contains a total of 20 data tables, with an additional log table to each of them. The log tables are used for audit trail to track history of changes on the Datamart. By logging all changes to the underlying table into the log table, it is possible to determine how, and when exactly the data in that specific table was modified over time, as well as who made the changes.

The framework also enables one to perform tasks repeatedly as additional census, survey and laboratory data is collected. Data collected over time has been stored in a central repository to enable timely and efficient retrieval for analysis and reporting by researchers. Integrated with the data mart is an online dashboard which provides a snapshot of trends of critical combination HIV prevention indicators like ART and circumcision coverage plus outcomes on HIV incidence and HIV prevalence.

The RHSP SQL server datamart runs in a VMware vSphere cluster of servers. The cluster offers high performance and good availability of services. These servers are backed up daily using Veeam which allows high recovery speed in case of data loss. The infrastructure is under redundant UPS power and effective cooling. The infrastructure is connected to high-speed fiber internet to enhance collaboration.

RHSP data office

Members of the data team at work


UNITED STATES PRESIDENT'S EMERGENCY PLAN FOR AIDS RELIEF
UGANDANS AND AMERICANS
IN PARTNERSHIP TO FIGHT HIV/AIDS
PEPFAR

PEPFAR@20

PEPFAR@20

As the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) celebrates its 20th anniversary this year, RHSP would like to recognize and appreciate the supportive partnership it holds in the fight to end HIV/AIDS in Masaka region and Uganda at large.

Steven J. Reynolds

As we celebrate PEPFAR at 20 and the impact the incredible impact HIV prevention and treatment programs have had on RHSP clients, it is also a good time to reflect on how PEPFAR and its supported clients have benefited from research at RHSP. The research program at RHSP has been instrumental at evaluating the core components of combination HIV prevention. Two noteworthy tools that have roots within the research program are medical male circumcision and antiretroviral treatment as prevention, both fundamental to PEPFAR prevention programs. The research program also was one of the first to demonstrate the importance of HIV viral load monitoring which changed policy at the global level. RHSP was also one of the first collaborations to provide empiric evidence that scaling up combination prevention can have a profound impact on reducing the number of new HIV infections. As we look at the next 20 years we at RHSP are committed to continue to do ground breaking research to inform programs and ultimately achieve HIV epidemic control.

Prof David Serwadda

PEPFAR has demonstrated that through committed sustained political leadership and leveraging evidence-based programs one can have a massive health impact on the dynamics of HIV transimition at individual and population level.

Dr Gertrude Nakigozi.

The PEPFAR program has had incredible impact on HIV prevention, care and treatment services in Uganda. Over the past 20 years of PEPFAR support to Rakai Health Sciences Program, we have seen great improvement in the health, quality of life and restoration of hope for persons living with HIV. We have also documented reduction in new HIV infections.

MUKISA RITAH'S RESPONSE

By offering DREAMS core packages like screening for HTS, STI, PrEP and mental health, young girls have been empowered to protect themselves against acquiring HIV. Services like school and community HIV prevention programs, Social Economic Services, partner sensitizations on PrEP, PEP and ART plus condom usage young girls have acquired knowledge that has encouraged them to be in charge of their lifestyles and engage in safer relationships. The behavior change in communities is so visible and can't be ignored because it has been passed on within different communities. PEPFAR funding is responsible for the low HIV prevalence amongst us young girls today and also it has helped many stay in school. I would still be having multiple partners and be living a risky life if I had not been enrolled into the DREAMS program. I am proud that with PEPFAR funding am employed as a data entrant at Kasensero safe space. My salary has enabled me achieve my dream of becoming a social worker as I managed to pay my tuition for a bachelors degree. My learned good communication skills have elevated me to represent DREAMS Masaka region in UN leadership training as a peer leader. I am grateful to PEPFAR.

NASSALI FARIDA

Girls have gained business skills, can start up small businesses and promote them to large businesses where they get money to support themselves. Girls and young women have known their rights and how to protect them by reporting GBV case and linking GBV survivors to responsible authorities. Girls have learned to protect themselves from acquiring HIV. Girls have learned to use birth control methods. Girls have been supported with IGA which have enabled them to get basic needs and contributed to the reduction of HIV acquisition since they are ever occupied by their businesses and are earning an income.

When I think about how life would be without PEPFAR funded DREAMS program, I see community and family development at its lowest, idleness amongst many girls which would lead them into high risky sexual behavior and a knowledge gap on HIV/AIDS as a disease and its prevention. I am thankful to PEPFAR.

Betty Nalumansi

(Name withheld)

"… through this program, I and my husband received HIV results together and it was then, that we learned about our HIV discordant situation 9 years ago, we are now managing our lives better and this has prevented the acquisition of HIV from my partner" 42-year-old female client, since 1999. I am thankful to PEPFAR for offering us free medication because it has greatly improved our lives.

Naluyima Gorretti

(Name withheld)

In the past HIV positive persons were looking so bad and community members would "kubeenyinyara" (stigmatize) that person, but now you can hardly know a person who has HIV, times have changed, and the program has been visiting us through home visits to check for adherence to ARVs". People can also receive couple counselling and get educated on how to live in a discordant relationship. Communities are educated about HIV through community meetings. People get to learn about their HIV status and if positive they can start ARVS early.

Participants of the PANGEA conference during a field visit to an RCCS camp in Kyotera.

PANGEA Consortium meeting

At the conference in Uganda, Matthew Hall presented the results about age and sex from the PopART Phylogenetics study in Zambia. The study used phylogenetics and mathematical modelling to analyse transmission patterns and it was found that both methods gave similar results. A previous study, *Demographic characteristics of sources of HIV-1 transmission in Zambia in the era of test and treat* showed that men between the ages of 25 and 40 years account for a disproportionate fraction of HIV transmission. On average, the number of transmissions originating from a man living with HIV was approximately three times higher than by a woman living with HIV.

Another study to which PANGEA contributed is the phylogenetic analysis of the Ya Tsie trial in Botswana which aimed to determine whether a package of interventions (primarily universal test-and-treat) significantly reduces population-level, cumulative HIV incidence in adults. It also looked estimating population-level uptake of the intervention components as well as cost-effectiveness of the intervention. Phylogenetic analysis revealed that most inferred HIV transmissions within the trial occurred within the same or between neighbouring communities, and between similarly aged partners. The study concluded that mobility patterns are fundamental to HIV transmission dynamics and to the impact of HIV control strategies. The paper *Deep-sequence phylogenetics to quantify patterns of HIV transmission in the context of a universal testing and treatment trial - BCPP/Ya Tsie trial* is available.

Neema Nakyanjo and Sarah Nakamanya presented their social science study about transmission linkage and networks in fishing and inland communities in Uganda. The objective of the study was to gain a deeper understanding into underlying factors that drive preferential migration of people living with HIV to high-prevalence Lake Victoria fishing communities, and reasons for lower ART use among these migrants. One of the main conclusions was that fishing communities are viewed as safe places, thus attracting people living with HIV. The study also established that there is a need to simplify enrolment onto HIV care.

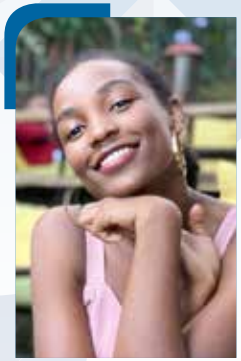
Fogarty Training

Research Training

Training in the United States of America

Joseph Ssuuna (Master's in Public Health, Johns Hopkins University, 2022) is currently a Vicinity study coordinator and Regional strategic Information team lead at RHSP. He completed his MPH in May 2022.

Jane Flavia Nakachwa is currently pursuing a Masters in Public Health at the Johns Hopkins Bloomberg School of Public Health with a concentration in Epidemiology and Biostatistics. Prior to Hopkins, she was a Laboratory Technologist at RHSP.



Martina Cathy Nakachwa is currently pursuing a Masters in Health Science in the Department of Molecular Microbiology and Immunology at the Johns Hopkins Bloomberg School of Public Health, and will be writing her thesis on universal vaccines for Ebola virus disease. Prior to Hopkins, she was a Laboratory Technologist at RHSP.

Aggrey Anok, a Senior Data Manager, is a first-year student of the Online Master of Science in Applied Data Analytics Program at Boston University. Students are equipped to critically analyse real-world problems by applying data mining and machine learning approaches.

Martha Kirabo completed her MPH at the Johns Hopkins Bloomberg School of Public Health in 2020 with concentrations in Epidemiology and Biostatistics, Vaccine Science, and Pharmacoepidemiology. She currently works as a vaccine safety physician at Glaxosmithkline Biologics and is based in Kampala, Uganda.

Prossy Namusisi completed her MPH at the Johns Hopkins Bloomberg School of Public Health in May 2022 with a concentration in Epidemiology and Biostatistics and an additional certificate in Maternal and Child Health and is currently a medical officer at Kawempe National Referral Hospital Uganda. This degree has equipped her with clinical research skills towards HIV, Maternal, adolescent and child health.

Edward Nelson Kankaka (MBChB, MPH) is a postdoctoral research fellow in the Division of Infectious Diseases, Johns Hopkins University School of Medicine. His training focus is the virology and immunology of HIV latency, under Drs Larry Chang and Thomas Quinn. His recent output (Aug-Dec 2022) includes:

- A poster presented at the HIV persistence 2022 meeting in Miami, Florida: "**Dating HIV-1 reservoir formation in ARV-suppressed Ugandans".** The manuscript is under review in *Virus Evolution.*
- Edward was a co-applicant on a multi-national grant application to the Welcome Trust **"Utilising heterogeneities in the African HIV epidemic to address the HIV reservoir and immune dysfunction challenges to facilitate HIV cure",** led by Dr Thumbi Ndung'u of the African Health Research Institute in South Africa.

Kauthrah Ntabadde is a Ugandan physician and early career researcher who recently graduated with a Master of Public Health degree from the Johns Hopkins Bloomberg School of Public Health. Following her graduation, she participated in the Academic Training program where she worked as a Clinical Trials Manager at Georgetown University in Washington DC. She is excited to apply the knowledge and skills she has gained to further research uptake, usage and implementation in Africa.

Trainees at Makerere University School of Public Health

Margaret Nalugemwa is a third-year Master of Public Health-Distance Education student at MakSPH, with keen interest in Epidemiology and Biostatistics. She is a Quality Control and Compliance Officer for the Rakai Health Sciences Program.

Tahiya Nakazibwe is a third-year Master of Public Health-Distance Education student at MakSPH, interested in Epidemiology and Biostatistics. She currently works with RHSP as the DREAMS technical lead.

Nicholus Nanyeenya is a PhD Candidate at Makerere University School of Public Health, with his thesis focused on HIV low-level viraemia in Uganda. He is currently a program officer at the Ministry of Health Department of National Health Laboratory Services for HIV viral load, EID and Sickle cell programs. He is currently at the data collection stage of his PhD, completing year two.

Mathias Agaba is a second-year Masters in Public Health-Distance Education student at Makerere University. He currently works as a Quality Control and Compliance Officer at RHSP, and is interested in developing research skills and health leadership structures as a way to solve challenges in human health.

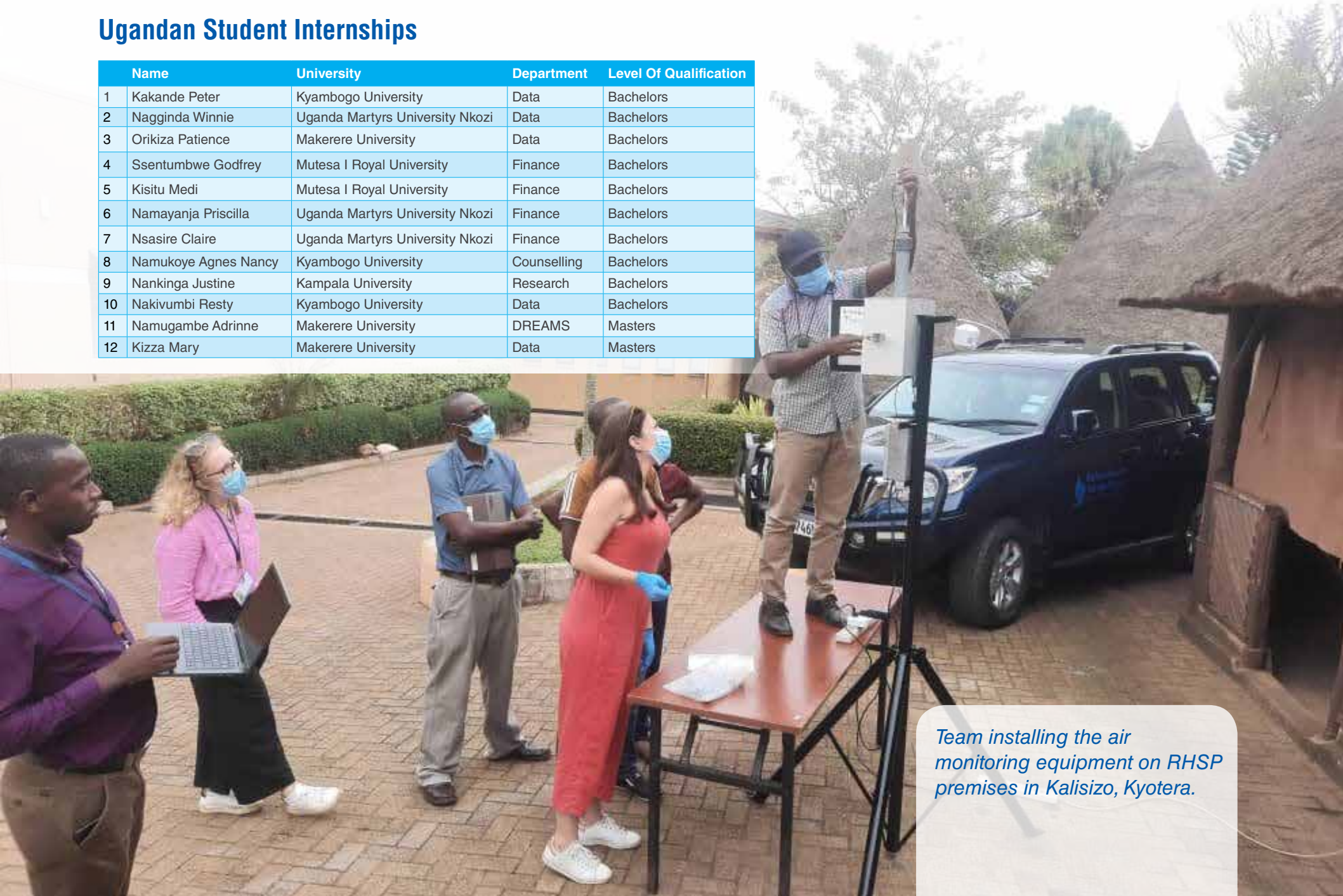
Innocent Kakeeto (Master's in Public Health, Makerere University) is in his second year. He is the ART clinic In-Charge at Kalisizo Hospital and also a Kyotera District CQI Coach, and is very passionate about research-driven programs to reduce the burden of HIV and TB.

Robert Bulamba (Masters in Public Health, Makerere University) is a Data Manager and Statistician with Africa Medical and Behavioral Sciences Organization (AMBSO). He is currently in his 2nd year undertaking specialized graduate level training in MPH.

Reuben Odieka is pursuing a Master of Public Health degree from Makerere University Kampala. Currently, he is working with USAID's Local Partner Health Services - Eastern Activity (USAID LPHS-E) as a Laboratory Technical Officer. He is in Year 2 of the MPH distance Program with a keen interest in Epidemiology and Biostatistics.

Ugandan Student Internships

	Name	University	Department	Level Of Qualification
1	Kakande Peter	Kyambogo University	Data	Bachelors
2	Nagginda Winnie	Uganda Martyrs University Nkozi	Data	Bachelors
3	Orikiza Patience	Makerere University	Data	Bachelors
4	Ssentumbwe Godfrey	Mutesa I Royal University	Finance	Bachelors
5	Kisitu Medi	Mutesa I Royal University	Finance	Bachelors
6	Namayanja Priscilla	Uganda Martyrs University Nkozi	Finance	Bachelors
7	Nsasire Claire	Uganda Martyrs University Nkozi	Finance	Bachelors
8	Namukoye Agnes Nancy	Kyambogo University	Counselling	Bachelors
9	Nankinga Justine	Kampala University	Research	Bachelors
10	Nakivumbi Resty	Kyambogo University	Data	Bachelors
11	Namugambe Adrinne	Makerere University	DREAMS	Masters
12	Kizza Mary	Makerere University	Data	Masters



Team installing the air monitoring equipment on RHSP premises in Kalisizo, Kyotera.

International Student Internships

	Name	Dates of stay	University	Project/Study attached to
1	David Naiman	11 June - 29 Oct;	John Hopkins University	Attached to VICINITY
2	Tongying Zhao	14 June - 15 Nov;	John Hopkins University	Attached to Longview Qualitative
3	Anh Van Vo	17 June - 11 Sept;	John Hopkins University	Attached to Longview Qualitative
4	Slisha Shrestha	17 June - 20 Aug;	John Hopkins University	Longview Quantitative data on persons reports viremia
5	Katie Kopp	11 July - 28 July;	Princeton University	PANGEA HIV incidence from age disparate relationships using the partner
6	Lauren Dudley	3 July - 2 Nov;	John Hopkins University	Working with the VICINITY team
7	Andrea Rodriguez		John Hopkins University	Working with Hard-to-Reach
10	Sophia Le	2 Oct - 29 Oct;	John Hopkins University	Attached to VICINITY
11	Greg Jason	14 May – 24 June;	John Hopkins University	Attached to Longview
12	Sarah Rashid	5 June – 16 Aug;	Columbia University	Impact of COVID-19 Lockdown on HIV and Reproductive Maternal Neonatal and Child Health services in Masaka region Uganda Punyatipat
13	Theppadol (Golf)	5 June;	Columbia University	Impact of COVID-19 Lockdown on HIV and Reproductive Maternal Neonatal and Child Health services in Masaka region Uganda
14	Eli Binder	5 July – Nov 30;	Columbia University	Concurrent sexual relationships and safe sex behaviors: A multi-faceted investigation
15	Lydia Namuganga		John Hopkins University	Participated in a half-day workshop on Mental Health Measures study analyses with the SBS team

Eli Binder, a student intern during a field visit.

Student interns from John Hopkins and Columbia University who did their research placements at RHSP.

Financial Report

Financial Report

RAKAI HEALTH SCIENCES PROGRAM GRANTS 2022/2023

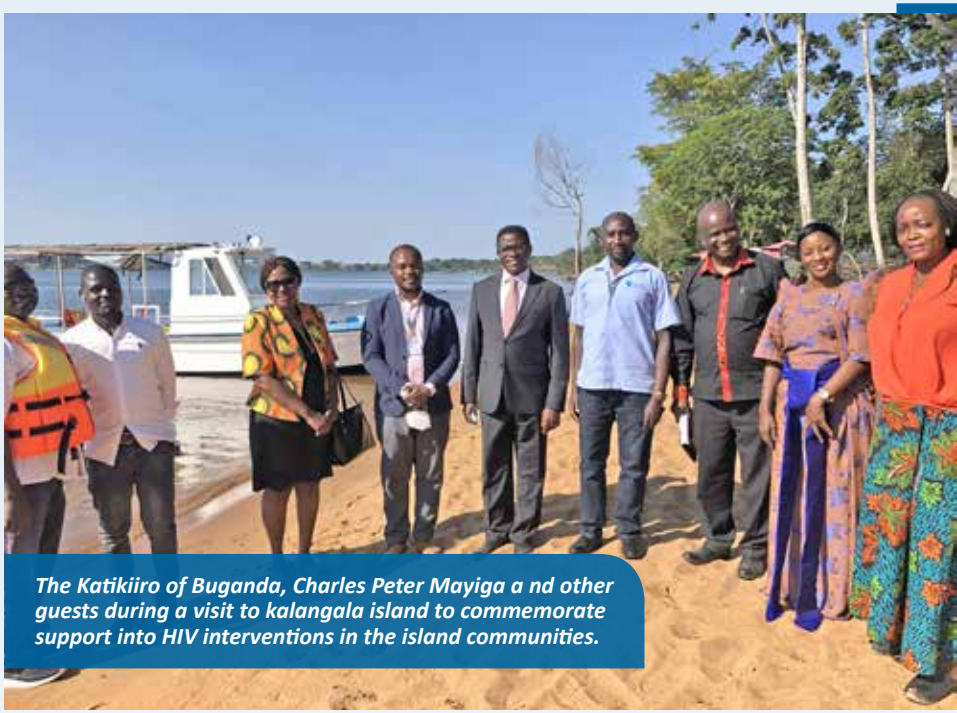
	Grant	Grant Period	Prime Funder	Award Amount in USD	Project Directors
1	SSTAR - Structural and social Transitions Among Adolescents in Rakai	AUGUST 2017-JULY 2022	NIH	753,656	John Santelli Fred Nalugoda
2	IeDEA Data Sharing East Africa international Epidemiologic databases to evaluate AIDS	AUGUST 2016-MAY 2024	NIH	365,854	Kara Wools Kaloustin Fred Nalugoda
3	Mortality Measurement Improving the measurement of adolescent and adult mortality in low income countries	SEPTEMBER 2017-JULY 2022	NIH	223,650	Stephen Hellinger Tom Lutalo
4	Migration RCT to reduce HIV acquisition and viral load among migrants, Rakai Uganda	AUGUST 2018-MAY 2023	NIH	1,418,409	Maria Wawer Godfrey Kigozi
5	ADOLESCENT GWU STUDY Penile Microbiome, Inflamation and HIV susceptibility during sexual debut and maturation among male adolescents	MAY 2016-APRIL 2023	NIH	465,845	Lance.B. Prince Godfrey Kigozi
6	Hard to Reach Populations Hard-to-Reach Populations for Ending the AIDS Epidemic	SEPTEMBER 2019-AUGUST 2024	NIH	1,293,051	Larry Chang Joseph Kagaayi
7	Mental Health and cognition Mental Health and cognition inHIV Infection in Uganda	AUGUST 2019-JUNE 2024	NIH	1,176,819	Maria Wawer Gertrude Nakigozi
8	SAS COV-2 IDI SARS COV-2 PREV-u-CHAT, thru IDI	OCTOBER 2020-SEPTEMBER 2022	CDC-PEPFAR	320,000	IDI (CDC) Galiwango Ronald Moses
9	SUUBI4HER A Combination Intervention Addressing HIV Risk Behaviors Among Older Adolescent Girls Transitioning into Adulthood in Uganda.	AUGUST 2018-MAY 2022	NIH	324,372	Fred Ssewamala Gertrude Nakigozi
10	FORGARTY D43 Multidisciplinary Research Training to Understand and Reduce HIV Incidence in Uganda	APRIL 2018-JANUARY 2023	NIH	418,769	Larry Chang Godfrey Kigozi
11	KYATEREKERA A combination intervention addressing sexual risk taking behaviors among vulnerable populations	JUNE 2018-MAY 2023	NIH	255,063	Fred Ssewamala Joseph Kagaayi

12	ART DIVERSION ART diversion in Rakai, Uganda	SEPTEMBER 2020-AUGUST 2023	NIH	100,000	Caitlin Kennedy Fred Nalugoda
13	NHLBI The impact of Epidemiology and Impact of HIV,NCD, and Urbanisation Syndemic in Africa	FEBRUARY 2021-JANUARY 2026	NIH	2,660,802	Larry Chang Joseph Kagaayi
14	LONGVIEW Long-term impact of universal treatment and dolutegravir on population HIV virogic incidence outcomes in Africa	APRIL 2021-MARCH 2025	NIH	1,006,160	Mary Kathryn Grabowski Joseph Kagaayi
15	Mental Health Measures Phase II and Transactional Sex and HIV among Men in Rakai, Uganda	AUGUST 2021-AUGUST 2022	NIH	22,726	Caitlin Kennedy
16	REACH Research Enterprise to Advance a cure of HIV	AUGUST 2021-APRIL 2025	NIH	553,201	Brad Jones Galiwango Ronald Moses
17	D43 COVID Supplement Multidisciplinary Research Training to Understand and Reduce HIV Incidence in Uganda	AUGUST 2021-JULY 2022	NIH	74,219	Larry Chang Godfrey Kigozi
18	Partner Study:How sex, host microenvironment, and immune responses shape acquisition of genital bacteria that increase HIV risk	DECEMBER 2021-NOVEMBER 2026	NIH	165,540	Cindy Galiwango Ronald Moses
19	Mogen clamp Vs Shangring Evaluation of Shangring Vs Mogen clamp for early infant male circumcision in sub saharan Africa	NOVEMBER 2016-MARCH 2022	NIH	249,715	Richard Lee Godfrey Kigozi
20	Penile Microbiome Penile Microbiome, Inflamation and HIV susceptibility during sexual debut and maturation among male adolescents	FEBRUARY 2017-JANUARY 2022	NIH	531,681	Aaron Tobian Godfrey Kigozi
21	Mlake CHWs, mHealth, and combination HIV prevention in a Hotspot: A randomzed Trial	MAY 2015-APRIL 2021	NIH	1,009,494	Larry Chang Gertrude Nakigozi
22	Alcohol in Women Alcohol Epideniology and pilot intervention to reduce alcohol, IPV, and HIV in women in Uganda	AUGUST 2015-JULY 2021	NIH	49,822	Jennifer Ann Wagman Godfrey Kigozi
23	PANGEA Fishing and inland communities-Caitlin`	JANUARY 2021-JUNE 2022	Bill & Melinda Gates	29,000	Neema Nakyanjo
24	Sexual health instrument testing	JANUARY 2021-OCTOBER 2023	NIH	20,000	Caitlin Kennedy
25	ALPHA GATES: Analysis of directly observed HIV incidence in the ALPHA network population-based surveillance studies.	OCTOBER 2018-SEPTEMBER 2020	Bill & Melinda Gates	130,637	Emma Slaymaker Tom Lutalo

26	AMFAR	OCTOBER 2018-MAY 2020	Foundation for AIDS Research, NY	50,000	Edward Nelson Kankaka
27	LATENT HIV Quantitave measurement and correlates of the latent HIV reservior in virally suppressed Ugandans.	AUGUST 2019-SEPTEMBER 2020	NIH	92,856	Steve Reynolds
28	Mental Health Measures - Caitlin	DECEMBER 2019-NOVEMBER 2020	NIH	7,500	Caitlin Kennedy
29	STI Self collection of samples	DECEMBER 2019-NOVEMBER 2020	NIH	12,500	Caitlin Kennedy
30	KAROLINSKA INSTITUTE PREP	AUGUST 2019-JULY 2020	Swedish Medical Research Council	10,000	Godfrey Kigozi
31	KAROLINSKA INSTITUTE-NCDs New Health Challenges	AUGUST 2019-JULY 2020	SMRC	144,397	Godfrey Kigozi
32	REACH Research Enterprise to Advance a Cure for HIV	AUGUST 2021 - April 2026	NIH	554,260	R.Brad Jones Ronald Galiwango
33	Verbal Autopsy: Reimagining data and automated cause assignment using APLHA network data	JULY 2021 - JUNE 2022	NIH	40,000	Tom Lutalo
34	HERA Compare prevalence of herpetic disease, demostrated by viral shedding of HSV-1&2 in the verginal secretions of HIV positive women	AUGUST 2018 -SEPTEMBER 2020	NIH	71,430	Steve Reynolds
35	Characterizing community exposure to SARS-CoV-2 in Uganda, and assessing biological determinants of virus spread'	JUNE2020-DECEMBER 2020	MOH	21,167	Joseph Kagaayi
36	Accelerating Epidemic Control in Masaka Region	April 2017 - September 2023	CDC-PEPFAR	111,677,728	David Serwadda
37	CDC IDI Vaccination Project	SEPTEMBER 2021-MARCH 2023	CDC-PEPFAR	200,000	IDI Galiwango Ronald Moses
38	CRS to support Pediatric QI	OCTOBER 2020-SEPTEMBER 2021	CDC-PEPFAR	306,000	Jessica Naginda

Gallery

A baby being tested for viral load.



The Katikiiro of Buganda, Charles Peter Mayiga a nd other guests during a visit to kalangala island to commemorate support into HIV interventions in the island communities.

A client getting ART refills at a pharmacy in Masaka town.

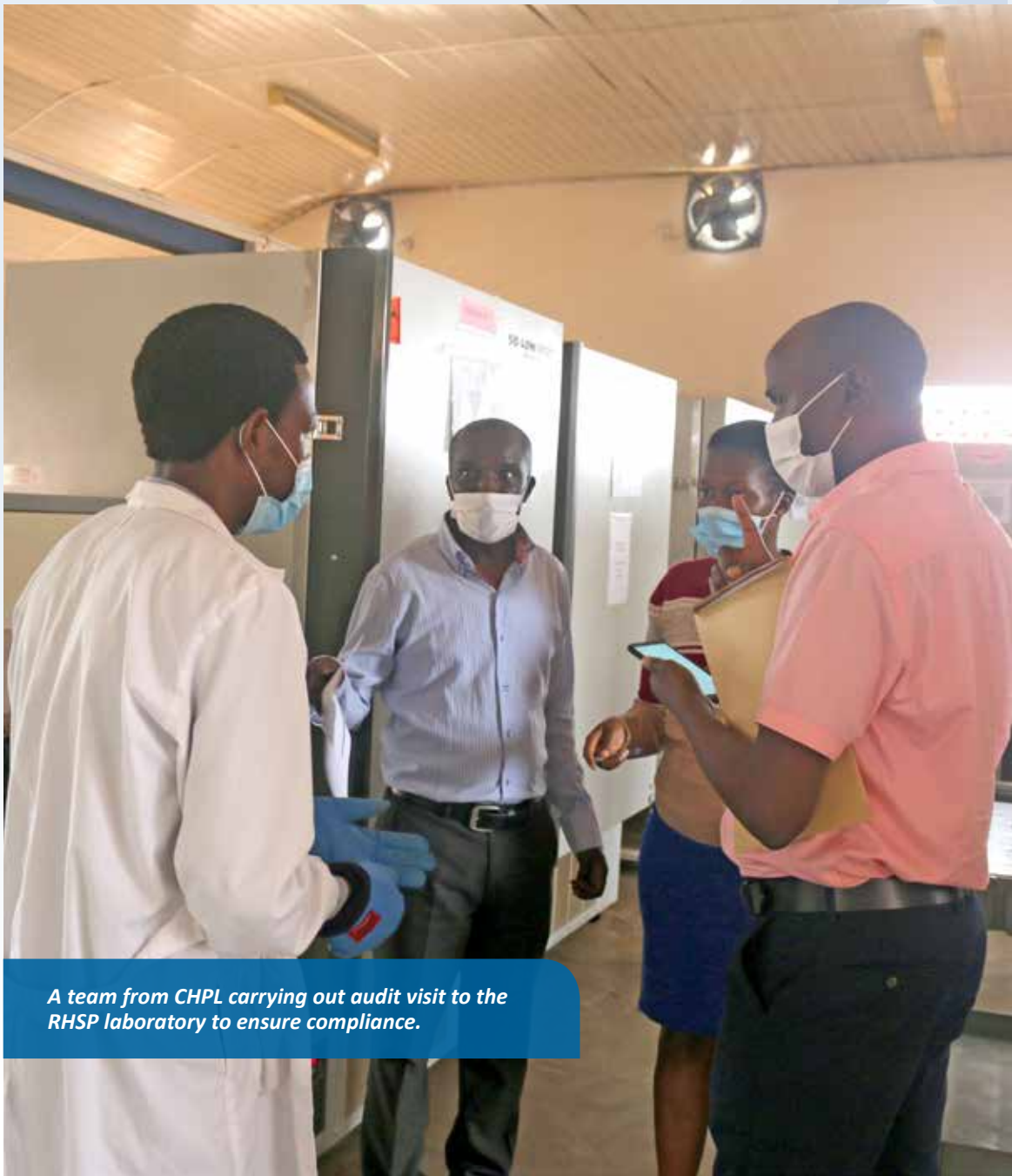
DREAMS girls being taught how to make Candles at a safe-space.

A DREAMS girl selling products to a client during the masaka canivore.

Students from different schools enrolled in DREAMS program receiving scholastic materials to support their education.

Panel discussion during PANGEA conference

Participants of the PANGEA conference during a field visit



A team from CHPL carrying out audit visit to the RHSP laboratory to ensure compliance.

DREAMS girls engaged in different activities at safe-spaces in kalangala islands.

Publications

Publications

How Does Voluntary Medical Male Circumcision Reduce HIV Risk?

Prodger JL, Galiwango RM, Tobian AAR, Park D, Liu CM, Kaul R.Curr HIV/AIDS Rep. 2022 Dec;19(6):484-490.

When Coffee Collapsed: An Economic History of HIV in Uganda.

Moore EV, Nambi R, Isabirye D, Nakyanjo N, Nalugoda F, Santelli JS, Hirsch JS.Med Anthropol. 2022 Jan;41(1):49-66.

Hypertension and Socioeconomic Status in South Central Uganda: A Population-Based Cohort Study.

Mustapha A, Ssekasanvu J, Chen I, Grabowski MK, Ssekubugu R, Kigozi G, Reynolds SJ, Gray RH, Wawer MJ, Kagaayi J, Chang LW, Post WS.Glob Heart. 2022 Jan 13;17(1):3.

The Penis, the Vagina and HIV Risk: Key Differences (Aside from the Obvious).

Kaul R, Liu CM, Park DE, Galiwango RM, Tobian AAR, Prodger JL.Viruses. 2022 May 27;14(6):1164.

Severe Acute Respiratory Syndrome Coronavirus-2 seroprevalence in South-Central Uganda, during 2019-2021.

Ssuuna C, Galiwango RM, Kankaka EN, Kagaayi J, Ndyanabo A, Kigozi G, Nakigozi G, Lutalo T, Ssekubugu R, Wasswa JB, Mayinja A, Nakibuuka MC, Jamiru S, Oketch JB, Muwanga E, Chang LW, Grabowski MK, Wawer M, Gray R, Anderson M, Stec M, Cloherty G, Laeyendecker O, Reynolds SJ, Quinn TC, Serwadda D.BMC Infect Dis. 2022 Feb 21;22(1):174.

Debating Sex and Sovereignty: Uganda's New National Sexuality Education Policy.

Moore EV, Hirsch JS, Spindler E, Nalugoda F, Santelli JS.Sex Res Social Policy. 2022 Jun;19(2):678-688.

Primary care provider notions on instituting community-based geriatric support in Uganda.

Ssensamba JT, Nakafeero M, Musana H, Amollo M, Ssennyonjo A, Kiwanuka SN.BMC Geriatr. 2022 Mar 29;22(1):258.

HIV status disclosure and antiretroviral therapy adherence among children in Masaka region, Uganda.

Kairania R, Onyango-Ouma W, Ondicho TG, Kigozi G.Afr J AIDS Res. 2022 Oct;21(3):251-260.

Immunometabolic Reprogramming in Response to HIV Infection Is Not Fully Normalized by Suppressive Antiretroviral Therapy.

Deme P, Rubin LH, Yu D, Xu Y, Nakigozi G, Nakasujja N, Anok A, Kisakye A, Quinn TC, Reynolds SJ, Mayanja R, Batte J, Wawer MJ, Sacktor NC, Saylor D, Haughey NJ.Viruses. 2022 Jun 15;14(6):1313.

Working with economically vulnerable women engaged in sex work: Collaborating with community stakeholders in Southern Uganda.

Nabunya P, Kiyingi J, Witte SS, Sensoy Bahar O, Jennings Mayo-Wilson L, Tozan Y, Nabayinda J, Mwebembezi A, Tumwesige W, Mukasa B, Namirembe R, Kagaayi J, Nakigudde J, McKay MM, Ssewamala FM.Glob Public Health. 2022 Jul;17(7):1215-1231.

Low-level viraemia: An emerging concern among people living with HIV in Uganda and across sub-Saharan Africa.

Nanyeenya N, Kiwanuka N, Nakanjako D, Nakigozi G, Kibira SPS, Nabadda S, Kiyaga C, Sewanyana I, Nasuuna E, Makumbi F.Afr J Lab Med. 2022 Oct 20;11(1):1899.

Perspectives of Women Living With HIV on Addressing Violence and Use of Alcohol During HIV Services: Qualitative Findings From Fishing Communities in Uganda.

Miller AP, Ddaaki WG, Bloom BE, Wirtz AL, Nakyanjo N, Kigozi G, Wagman JA.Violence Against Women. 2022 May;28(6-7):1483-1504.

"Sex is supposed to be naturally more pleasurable": Healers as providers of holistic sexual and reproductive healthcare in Uganda.

Moore EV, Ddaaki W, Hirsch JS, Chang L, Nalugoda F, Santelli JS.Soc Sci Med. 2022 Mar;296:114756. doi: 10.1016/j.socscimed.2022.114756. Epub 2022 Jan

The HIV and sexually transmitted infection syndemic following mass scale-up of combination HIV interventions in two communities in southern Uganda: a population-based cross-sectional study.

Grabowski MK, Mpagazi J, Kiboneka S, Ssekubugu R, Kereba JB, Nakayijja A, Tukundane J, Jackson JC, Peer AD, Kennedy C, Kigozi G, Galiwango RM, Manabe YC, Chang LW, Kalibala S, Gray RH, Wawer MJ, Reynolds SJ, Tobian AAR, Serwadda D, Gaydos CA, Kagaayi J, Quinn TC; Rakai Health Sciences Program.Lancet Glob Health. 2022 Dec;10(12):e1825-e1834.

Acceptability and feasibility of mobile phone-based ecological momentary assessment and intervention in Uganda: A pilot randomized controlled trial.

Beres LK, Mbabali I, Anok A, Katabalwa C, Mulamba J, Thomas AG, Bugos E, Grabowski MK, Nakigozi G, Chang L.PLoS One. 2022 Aug 26;17(8):e0273228. doi: 10.1371/journal.pone.0273228. eCollection 2022.PMID: 36018846

Hepatitis B virus infection and factors associated with its acquisition among adults in a Lake Victoria HIV hyperendemic fishing community in Kyotera district, Uganda: a cross-sectional observation.

Ssuuna C, Ssempijja V, Kalibbala S, Serwadda D, Yeh PT, Wawer M, Gray R, Chang L, Kagaayi J, Reynolds S.BMJ Open. 2022 Apr 7;12(4):e050436. doi: 10.1136/bmjopen-2021-050436.PMID: 35393306

Women's support for voluntary medical male circumcision in fishing communities on the shores of Lake Victoria, Uganda.

Byaruhanga A, Mbona NT, Babirye S, Nalugoda F, Kankaka EN, Ampaire L, Migisha R, Kagaayi J.BMC Health Serv Res. 2022 Apr 14;22(1):505.

Impact of an intensive facility-community case management intervention on 6-month HIV outcomes among select key and priority populations in Uganda.

Meya DB, Kiragga AN, Nalintya E, Banturaki G, Akullo J, Kalyesubula P, Sessazi P, Bitakalamire H, Kabanda J, Kalamya JN, Namale A, Bateganya M, Kagaayi J, Gutreuter S, Adler MR, Mitruka K.AIDS Res Ther. 2022 Dec 5;19(1):62.

Prevalence of cardiovascular risk factors by HIV status in a population-based cohort in South Central Uganda: a cross-sectional survey.

Enriquez R, Ssekubugu R, Ndyanabo A, Marrone G, Gigante B, Chang LW, Reynolds SJ, Nalugoda F, Ekstrom AM, Sewankambo NK, Serwadda DM, Nordenstedt H.J Int AIDS Soc. 2022 Apr;25(4):e25901.

Prevalence and predictors of HIV and sexually transmitted infections among vulnerable women engaged in sex work: Findings from the Kyaterekera Project in Southern Uganda.

Kiyingi J, Nabunya P, Bahar OS, Mayo-Wilson LJ, Tozan Y, Nabayinda J, Namuwonge F, Nsubuga E, Kizito S, Nattabi J, Nakabuye F, Kagayi J, Mwebembezi A, Witte SS, Ssewamala FM.PLoS One. 2022 Sep 29;17(9):e0273238.

The Long-term (5-year) Impact of a Family Economic Empowerment Intervention on Adolescents Living with HIV in Uganda: Analysis of Longitudinal Data from a Cluster Randomized Controlled Trial from the Suubi+Adherence Study (2012-2018).

Brathwaite R, Ssewamala FM, Mutumba M, Neilands TB, Byansi W, Namuwonge F, Damulira C, Nabunya P, Nakigozi G, Makumbi F, Mellins CA, McKay MM, Team SAF.AIDS Behav. 2022 Oct;26(10):3337-3344.

Routine Antiretroviral Pharmacy Refill Information Can Predict Failure Postpartum in Previously Suppressed South African Women With HIV.

Gawler N, Reynolds SJ, Hsiao NY, Clarke W, Maartens G, Abrams EJ, Myer L, Redd AD, Phillips TK.Open Forum Infect Dis. 2022 Sep 17;9(10):ofac483. doi: 10.1093/ofid/ofac483. eCollection 2022 Oct. PMID: 36275867

Immune milieu and microbiome of the distal urethra in Ugandan men: impact of penile circumcision and implications for HIV susceptibility.

Galiwango RM, Park DE, Huibner S, Onos A, Aziz M, Roach K, Anok A, Nnamutete J, Isabirye Y, Wasswa JB, Male D, Kigozi G, Tobian AAR, Prodger JL, Liu CM, Kaul R.Microbiome. 2022 Jan 18;10(1):7.

Self-reported and pill count measures of adherence to oral HIV PrEP among female sex workers living in South-Western Uganda.

Nakiganda LJ, Grulich AE, Poynten IM, Serwadda D, Bazaale JM, Jin J, Bavinton BR.PLoS One. 2022 Nov 10;17(11):e0277226.

Capacity to Consent to Research Among Adolescent-Parent Dyads in Rakai, Uganda.

Kreniske P, Hoffman S, Ddaaki W, Nakyanjo N, Spindler E, Ssekyewa C, Isabirye D, Nakubulwa R, Proscovia N, Daniel L, Haba N, Maru M, Thompson J, Chen IS, Nalugoda F, Ssekubugu R, Lutalo T, Ott MA, Santelli JS.J Pediatr. 2022 Nov 17:S0022-3476(22)01020-4.

Smoker characteristics and trends in tobacco smoking in Rakai, Uganda, 2010-2018.

Nalugoda F, Nabukalu D, Ssekasanvu J, Ssekubugu R, Hoe C, Kagaayi J, Sewankambo NK, Serwadda DM, Wawer MJ, Grabowski KM, Reynolds SJ, Kigozi G, Gray RH, Yeh PT, Chang LW.Tob Induc Dis. 2022 Feb 28;20:23.

Examining Masculinities to Inform Gender-Transformative Violence Prevention Programs: Qualitative Findings From Rakai, Uganda.

Park E, Wolfe SJ, Nalugoda F, Stark L, Nakyanjo N, Ddaaki W, Ssekyewa C, Wagman JA.Glob Health Sci Pract. 2022 Feb 28;10(1):e2100137.

Makerere's contribution to the development of a high impact HIV research population-based cohort in the Rakai Region, Uganda.

Kankaka EN, Nalugoda F, Serwadda D, Makumbi F, Wawer MJ, Gray RH, Quinn TC, Reynolds SJ, Nakigozi G, Lutalo T, Kigozi G, Sewankambo NK, Kagaayi J.Afr Health Sci. 2022 Aug;22(Spec Issue):42-50. doi: 10.4314/ahs.v22i2.7S.PMID: 36321125 **Free PMC article.**

Brief Report: Mobile Phones, Sexual Behaviors, and HIV Incidence in Rakai, Uganda, From 2010 to 2018.

Kreniske P, Nalugoda F, Chen I, Huang R, Wei Y, Chang L, Ssekubugu R, Lutalo T, Kigozi G, Kagaayi J, Sewankambo N, Grabowski MK, Gray R, Serwadda D, Santelli J.J Acquir Immune Defic Syndr. 2022 Apr 1;89(4):361-365.

Gendered access to digital capital and mobile phone ownership among young people in Rakai, Uganda.

Basmajian A, Kreniske P, Moore EV, Spindler E, Nalugoda F, Nakyanjo N, Ddaaki W, Santelli JS, Hirsch JS.Cult Health Sex. 2022 Jun 15:1-16.

"A Double Stress": The Mental Health Impacts of the COVID-19 Pandemic Among People Living with HIV in Rakai, Uganda.

West NS, Ddaaki W, Nakyanjo N, Isabirye D, Nakubulwa R, Nalugoda F,

Kagaayi J, Kennedy CE.AIDS Behav. 2022 Jan;26(1):261-265.

HIV Prevention and Treatment Behavior Change and the Situated Information Motivation Behavioral Skills (sIMB) Model: A Qualitative Evaluation of a Community Health Worker Intervention in Rakai, Uganda.

Pollard R, Kennedy CE, Hutton HE, Mulamba J, Mbabali I, Anok A, Nakyanjo N, Chang LW, Amico KR.AIDS Behav. 2022 Feb;26(2):375-384.

High Rates of Pre-exposure Prophylaxis Eligibility and Associated HIV Incidence in a Population With a Generalized HIV Epidemic in Rakai, Uganda.

Ssempijja V, Nakigozi G, Ssekubugu R, Kagaayi J, Kigozi G, Nalugoda F, Nantume B, Batte J, Kigozi G, Yeh PT, Nakawooya H, Serwadda D, Quinn TC, Gray RH, Wawer MJ, Grabowski KM, Chang LW, Van't Hoog A, Cobelens F, Reynolds SJ.J Acquir Immune Defic Syndr. 2022 Jul 1;90(3):291-299.

Impact of community health worker intervention on PrEP knowledge and use in Rakai, Uganda: A mixed methods, implementation science evaluation.

Edwards AJ, Pollard R, Kennedy CE, Mulamba J, Mbabali I, Anok A, Kong X, Nakyanjo N, Ddaaki W, Nishimura H, Wawer M, Amico KR, Hutton HE, Nakigozi G, Chang LW.Int J STD AIDS. 2022 Oct;33(11):995-1004

Incident HIV Infection Among Young Men Associated With Female Sexual Partner Types Identified Through Latent Class Analysis, Rakai, Uganda.

Hoffman S, Zhang A, Nguyen N, Tsong R, Chen IS, Wei Y, Lutalo T, Nalugoda F, Kennedy CE, Grabowski MK, Santelli JS.J Acquir Immune Defic Syndr. 2022 Jun 1;90(2):124-131

HIV combination prevention and declining orphanhood among adolescents, Rakai, Uganda, 2001-18: an observational community cohort study.

Santelli JS, Chen IS, Nabukalu D, Lutalo T, Spindler EJ, Chang LW, Grabowski MK, Grilo SA, Kreniske P, Wei Y, Nalugoda F, Hoffman S, Maru M, Chu S, Ssewamala FM, Byansi W, Kagaayi J, Wawer MJ, Gray RH, Serwadda D, Makumbi F.Lancet HIV. 2022 Jan;9(1):e32-e41.

Cardiovascular (Framingham) and type II diabetes (Finnish Diabetes) risk scores: a qualitative study of local knowledge of diet, physical activity and body measurements in rural Rakai, Uganda.

Ssekubugu R, Makumbi F, Enriquez R, Lagerström SR, Yeh PT, Kennedy CE, Gray RH, Negesa L, Serwadda DM, Kigozi G, Ekström AM, Nordenstedt H.BMC Public Health. 2022 Nov 29;22(1):2214.

PrEP acceptability and initiation among women engaged in sex work in Uganda: Implications for HIV prevention.

Witte SS, Filippone P, Ssewamala FM, Nabunya P, Bahar OS, Mayo-Wilson LJ, Namuwonge F, Damulira C, Tozan Y, Kiyingi J, Nabayinda J, Mwebembezi A, Kagaayi J, McKay M.EClinicalMedicine. 2022 Jan 28;44:101278.

2023

A Moving Target: Impacts of Lowering Viral Load Suppression Cutpoints on Progress Towards HIV Epidemic Control Goals.

Rosen JG, Reynolds SJ, Galiwango RM, Kigozi G, Quinn TC, Ratmann O, Ndyanabo A, Nelson LJ, Nakigozi G, Nalugemwa M, Rucinski KB, Kennedy CE, Chang LW, Kagaayi J, Serwadda D, Grabowski MK.medRxiv. 2023 Jan 20:2023.01.19.23284804

Is voluntary male medical circumcision still cost-effective in the setting of antiretroviral therapy scaleup in sub-Saharan Africa?

Serwadda D, Kigozi G.Lancet Glob Health. 2023 Feb;11(2):e179-e180.

Dual mechanism: Epigenetic inhibitor apabetalone reduces SARS-CoV-2 Delta and Omicron variant spike binding and attenuates SARS-CoV-2 RNA induced inflammation.

Fu L, Gilham D, Stotz SC, Sarsons CD, Rakai BD, Tsujikawa LM, Wasiak S, Johansson JO, Sweeney M, Wong NCW, Kulikowski E.Int Immunopharmacol. 2023 Feb 23;117:109929.

The association between low-level viraemia and subsequent viral non-suppression among people living with HIV/AIDS on antiretroviral therapy in Uganda.

Nanyeenya N, Chang LW, Kiwanuka N, Nasuuna E, Nakanjako D, Nakigozi G, Kibira SPS, Nabadda S, Kiyaga C, Makumbi F.PLoS One. 2023 Jan 13;18(1):e0279479.

Civil society and medical product access in Africa: Lessons from COVID-19.

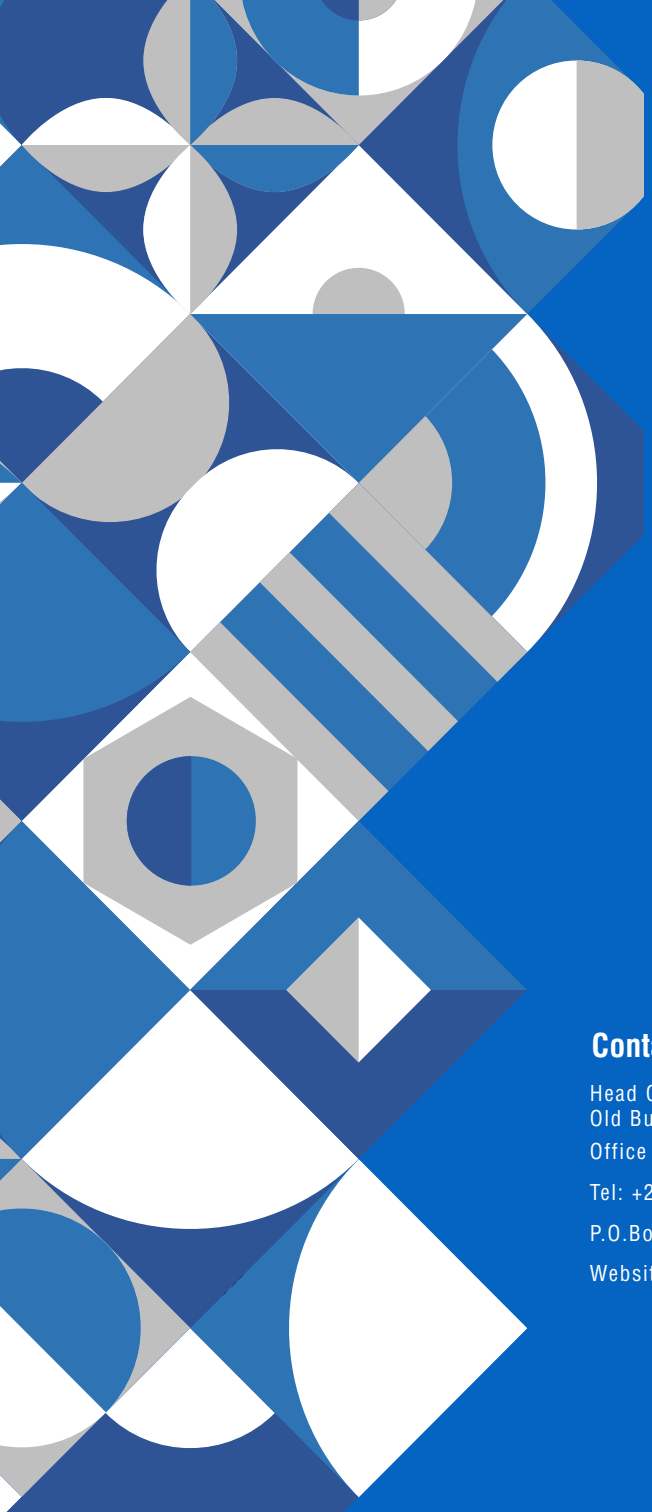
Wale JL, Sehmi K, Kamoga R, Ssekubugu R.Front Med Technol. 2023 Feb 7;5:1091425.

DYNAMICS OF PRE-EXPOSURE (PrEP) ELIGIBILITY DUE TO WAXING AND WANING OF HIV RISK IN RAKAI, UGANDA.

Ssempijja V, Ssekubugu R, Kigozi G, Nakigozi G, Kagaayi J, Ekstrom AM, Nalugoda F, Nantume B, Batte J, Kigozi G, Yeh PT, Nakawooya H, Serwadda D, Quinn TC, Gray RH, Wawer MJ, Grabowski KM, Chang LW, Hoog AV, Cobelens F, Reynolds SJ.J Acquir Immune Defic Syndr. 2023 Mar 6.

The Acceptability of Self-Collected Samples for STI Testing: A Qualitative Study Among Adults in Rakai, Uganda.

Ogale YP, Grabowski MK, Nabakka P, Ddaaki W, Nakubulwa R, Nakyanjo N, Nalugoda F, Kagaayi J, Kigozi G, Denison JA, Gaydos C, Kennedy CE.medRxiv. 2023 Feb 23:2023.02.17.23286055.



Contact us:

Head Office
Old Bukoba Rd

Office Email: info@rhsp.org

Tel: +256 200 900 384

P.O.Box 279, Kalisizo

Website: www.rhsp.org