Zambart

Research and Development to Improve Health for All

ANNUAL REPORT 2020




















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Acronyms

ACABs	Adolescent Community Advisory Boards
ALWH	Adolescents Living With HIV
ART	Antiretroviral treatment
ASLM	African Society for Laboratory Medicine
BILHIV	BILHIV
BCWs	BILHIV Community Workers
CABs	Community Advisory Boards
CAD	Computer Aided Diagnostic
CE	Community Engagement
CHiP	Community HIV-care Provider
CPP	Community Partners' Platform
CRT	Cluster-Randomised Trial
CSE	Comprehensive Sexual Education
CXR	Chest Xray
DCE	Discrete Choice Experiment
DFID	Department for International Development
EDC	Electronic Data Capture
EDCTP	European & Developing Countries Clinical Trials Partnership
EGPAF	Elizabeth Glaser Paediatric AIDS Foundation
EPHSA	Evidence for HIV Prevention in Southern Africa
ETB	Eradicate TB Project
EWEC	United Nations Every Woman Every Child
HBHCT	Home Based HIV Counselling and Testing
HCT	HIV Counselling and Testing
HEU	Health Economics Unit

HFS	Health facility survey
HIV	Human Immunodeficiency Virus
HIVST	HIV self-testing
HPTN07	HIV Prevention Network
HTS	HIV testing services
IDPFU	Intensive Diagnostic Phase Follow UP
IEC	Information, Education, and Communication
MFS	Mobile Field Sites
MoH	Ministry of Health
MTB	MTB
NHRA	National Health Research Authority
NORAD	Norwegian Agency for Development Cooperation
NTLP	National TB and Leprosy Program
OR	Operational Research
P-ART-Y	PopART for Youth/Young People
PATH	PATH
PLHIV	People Living With HIV
PMTCT	Prevention of Mother to Child Transmission
PopART	Population effect of universal testing and immediate ART to Reduce HIV Transmission
PC	Population Cohort
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
RA	Research Assistant
RE	Research Enumerators
SA	South Africa
SAG	Study Advisory Group
SIDA	Swedish International Development Agency
SRH	Sexual and Reproductive Health

STI	Sexually Transmitted Infections
SSA	Sub-Saharan Africa
STAR	HIV Self-Testing Africa
TASP	Treatment as Prevention
TB	Tuberculosis
TB018	TB Vaccine study
TREATS	Tuberculosis Reduction through Expanded Antiretroviral Treatment and Screening for active TB
UNZABREC	University of Zambia Biomedical Research Ethics Committee
USAID	U.S. Agency for International Development
UTT	Universal Test and Treat
WHO	World Health Organization
ZCSPP	Zambart Civil Society Partnership Platform
ZNHRA	Zambia National Health Research Authority

Executive Director's Report

Dr. Alwyn Mwinga
Executive Director

On behalf of the Zambart management, I am pleased to present Zambart's annual report for 2020. As was the case around the globe, 2020 was dominated by the COVID-19 pandemic. As the number of reported cases in Zambia increased, and in line with the guidance from the National Health Research Authority, adjustments were made to the working arrangements in order to protect the staff and study participants from COVID infection. These adjustments included suspension of field activities, the use of telephonic interviews for data collection where possible, and implementation of 'work-at-home' for staff at the Head Office in order to reduce exposure to infection. The positive response of the Zambart staff to the measures that were implemented, notwithstanding the challenges that occurred as a result, deserves special mention and demonstrated the resilience of the staff. I would like to particularly recognize the IT team for the support they provided in ensuring that the transition to virtual meetings was seamless. In order to ensure that management was able to rapidly communicate with all staff, a Zambart-wide WhatsApp group was established, and this was also used to share with staff the updates on the COVID situation by the Ministry of Health. Zambart had commissioned the development of an automated procurement system in 2019 as one step in transforming Zambart into a paperless organization, and the work-at-home situation provided a good opportunity to test the system and ensure that administrative functions could continue under the 'new normal'.

The increasing focus of the global research community on COVID-19 presented some challenges to Zambart research work, with the potential for delayed delivery of study outputs and delays in obtaining some study specific reagents and supplies. The increased research funding for COVID related studies, however, provided an opportunity for Zambart to successfully apply

for funding for COVID studies that were either stand alone or embedded in existing studies. This will enable Zambart to contribute to the body of knowledge about COVID-19 in the Zambian context and contribute to policy formation around outbreak responses.

As the first wave of the pandemic waned, and research activities in the field were restarted under strict observance of the public health measures to prevent the transmission of the coronavirus in facility and community settings, engagement with the communities in which the research activities occurred took centre stage in planning and execution of the activities. Zambart values the working relationship that has been established with the various communities and the involvement of the Adult and Adolescent Community Advisory Boards.

The Ministry of Health is a key partner in all Zambart's activities and all research activities in the health facilities and communities is undertaken under a Memorandum of Understanding with the Ministry. Despite the challenges of the COVID-19 pandemic in 2020, Zambart was able to successfully complete the collection of TB samples from all 10 Provinces for the 2019- 2020 TB Drug Resistance Survey, with the support of the Ministry of Health.

The Guarantors of Zambart appointed a new Board of Directors and the inaugural meeting of the new Board took place in February 2020. The Board is chaired by Prof Charles Michelo, then Dean of the University Of Zambia School Of Public Health. Due to the COVID-19 pandemic the first Board meeting was the only one held at Zambart House during the year, and all subsequent meetings were held virtually. The composition of the Board, with scientific/ research expertise, as well as legal and business professionals, will enable the Board to provide Management with expert guidance in the implementation of the 2019 – 2025 Strategic plan that has the vision of positioning Zambart as Africa's leading public health research and training organization.

The achievements in this annual report reflect the visionary leadership of the Director of Research, Prof. Helen Ayles, and her outstanding guidance of the Research Directorate team. In 2020–21, we will maintain focus on completing the existing studies, winning more grants, and building partnerships with our stakeholders. This will ensure that the research activities contribute to health and development for all through the generation of evidenced-based public health policies. Zambart will continue to strive for excellence in both the research activities, as well as in all administrative procedures.

I would like thank all the staff of Zambart for their dedication, commitment and passion to ensuring the successful implementation of the research studies in one of the most challenging periods in our history.

Research Director's Report

Prof. Helen Ayles

Director of Research, Zambart, Professor of Infectious Diseases and International Health, London School of Hygiene and Tropical Medicine

2020 was an incredibly challenging year. Like much of Zambia, Zambart was impacted firstly by the COVID-19 pandemic and then the subsequent COVID-19 related restrictions. Despite these challenges, we continued to conduct our studies as best as we could while supporting the Ministry of Health's response to the pandemic. Data from research studies of the like that Zambart conducts continue to play an increasingly powerful role in informing policy and research in health and development in Zambia and the rest of the world.

Due to the COVID-19 restrictions and the pause in our field work, we adapted our work to meet our grant obligations. By the end of July 2020, our office staff were working from home and our field staff were working on a rotational basis. We embraced a flexible approach in response to the COVID-19 pandemic. We shifted our resources internally, put some work on hold to take on new work and increased demand for some services, particularly in our laboratories. Zambart supported efforts by the government of Zambia by providing an Xpert machine to Muchinga Province to improve COVID-19 testing during the height of infections in the province and made available the Central Laboratory at Zambart head office and regional facilities for sample preparation.

In compliance with decisions of the Ministry of Health and advice from the Zambia National Research Authority, Zambart suspended all field work from April – July 2020. This measure prompted the organisation to apply for and secure no cost extensions for our studies in order to meet the study timelines. During this time, staff remote working arrangements were put in

place for head office staff and field lead staff. To ensure that staff had access to information during this time, a Zambart-wide WhatsApp group was formed, and other computer applications to ease remote working were introduced. From July to August, staff worked on Standard Operating Procedures (SOP's) in readiness of resumption of field work in September. These SOP's would save as a guide to support our staff maintain a safe and healthy workplace.

To ensure the health and safety of staff working from a Zambart office or field site, we implemented safety measures in line with government and health advice, including:

- promoting physical distancing and maintaining strong personal hygiene
- limiting the number of people who can occupy meeting rooms
- providing hand sanitizer and spray disinfectant in all communal areas and meeting rooms
- undertaking additional professional cleaning
- replacing face-to-face meetings with teleconferences or videoconferences.

We also continued to promote the Employee Wellness Program and share resources and information to support all staff to remain COVID safe.

I have worked with Zambart for over 20 years now and I am proud of the tremendous progress made by our organisation in working towards our goal of becoming a leader in public health research in the region by 2025. This has been reflected our ability to attract funding for new projects even in challenging times like the COVID-19 pandemic. In 2020, Zambart was awarded 4 new grants. These are the TREATS COVID-19 study, SCEPTRES - Supporting Community Engagement to Promote Tuberculosis Research Ethics and Science, urban infrastructure of well-being study, and AMPHEUS - Analytics and Microbiology for Precision Health; a Unified System analytics and microbiology for precision health. We have worked to enhance engagement with stakeholders and this has enabled us to improve our timeliness and responsiveness, and facilitate efficient growth in Zambart's programs. We continue to invest in our staff by providing an environment for learning and upgrading their skills.

I would like to thank all members of Zambart's Research Directorate for their tireless work during this period for their strategic guidance of Zambart's research studies. Most of all, I am privileged to lead a research team of highly qualified, talented and motivated people who have a strong culture of collaboration and commitment to excellence in delivering high quality work time and time again.

Outlook for 2021

COVID-19 reinforced the need for timely reporting. Our key priority for 2021 will be to continue to work with our stakeholders to develop ways to improve our capability to conduct our studies more efficiently. We will continue improving our flexible approach to managing our work commitments, meeting new demands and keeping our staff safe during the COVID-19 pandemic. We will build on our strong and established relationships with the Zambian Ministry of Health and other partners to improve knowledge translation practices in health research to impact policy.

To achieve our goals in 2021, we will continue to work with all our partners to maintain our role as one of the leading organisation in health research in Zambia.

Zambart would like to acknowledge the contribution and support of our funders and partners over the last year.

In brief

Our purpose

To be internationally recognized as Africa's leading public health research and training organization

Our values

Zambart's key values are Excellence, Quality and Compassion.

Key elements underpinning all of the strategic priorities of the organization as these values should be for the whole organization and not only the RD are excellence, quality and compassion. Zambart aims to conduct all of its activities to the highest standards of research and ethics. The motivation for all that Zambart does is to improve the health of the people of Zambia and the rest of the world.

Our strategic goals

Over the next 5 years, we will apply and strengthen our capabilities to ensure Zambart:

1. Strengthens existing areas and expands beyond HIV & TB into other areas of health research
2. Develops trong strategic Partnership: Strengthening existing partnerships and developing new ones
3. Develops a great Global Reputation: being visible and well known locally, regionally and globally
4. Has demonstrable Policy Impact & Influence: Locally and internationally
5. Attains financial Sustainability
6. Develops a robust Training and Consultancy arm: a self-sustaining business providing services to others
7. Is a great Place to work

Our organisation

The Companies Act of 2017 is our enabling legislation and establishes the Zambart Board which is the organisation's governing body. Further information about how we operate and the role and composition of the Senior Management Team are specified in Chapter 4 Our organisation.

The Board is responsible for setting the overall policy and strategic directions of the organisation. For planning purposes, Zambart prepares a corporate plan and budget estimates as required by the Act. The Executive Director manages the day-to-day affairs of the organisation with the assistance of the Director of Research and a Senior Management Team.

For reporting purposes, it prepares an annual performance statement, also as required by

the Act. All of the work we undertake is subject to ethical clearance by the various local and international Ethics Committees

Stakeholders

Our stakeholders are important to us as groups to which we are accountable, who fund us, and to whom we target our studies. They include:

- The people of Zambia
- The Zambia Government through the Ministry of Health and its departments and agencies
- Provincial and district health administrations and their departments with responsibilities for health and community services, education and justice
- Public health service providers, professionals and non-government organisations
- Consumers of public health assistance services
- The research community.

Zambart collaborates closely and has effective partnerships with many individual government entities, universities, research centres, non-government organisations and individual experts throughout the country.

Zambart continuously receives feedback from participants in our studies to gain insight into the perceptions of our stakeholders. Overall, the feedback provides positive results and evidence that Zambart is achieving its strategic objectives.

International partnerships

Zambart partners with many institutions around the world and works diligently to forge new ones when opportunity arises. Apart from historic strong partnerships with the London School of Hygiene and Tropical Medicine and with the University of Zambia, School of Public health, Zambart continues to enjoy strong partnerships with other institutions including the National Institute of Public Health, Imperial College, HPTN, Johns Hopkins University, International Centre for Research on Women and the Universities of Toronto and McMaster. Over the past one year, Zambart has developed new partnerships with the British Academy, Institutional Strategic Support Fund under the Wellcome Trust and the International AIDS Vaccine Initiative.

Zambart would like to acknowledge the contribution and support of our funders and partners over the last year:

- Aeras/GSK
- Berth Israel Deaconess Medical Centre
- Bill & Melinda Gates Foundation
- The British Academy

- Delft Imaging Systems, Netherlands
- Desmond Tutu TB Centre- Stellenbosch University
- Department for International Development
- European and Developing Countries Clinical Trials Project II
- Family Health International 360 (FHI360)
- Imperial College
- International Initiative for Impact Evaluation (3IE)
- London School of Hygiene and Tropical Medicines (LSHTM)
- Medical Research Council- UK
- Ministry of Health, Zambia
- National Institute of Health, USA
- Overseas Development Institute
- PATH Zambia
- Population Council, Zambia
- Population Services International/UNIT AID
- QIAGEN GmbH
- SHM Foundation
- The University of Toronto
- The University of Zambia, School of Public Health
- The University Teaching Hospital, Lusaka
- The International AIDS Vaccine Initiative
- The University of Oxford

Our Leadership Team

Dr. Alwyn Mwinga,
Executive Director

Prof. Helen Ayles,
Director of Research, Zambart, Professor of Infectious Diseases and International Health, London School of Hygiene and Tropical Medicine

Frank Mbozi,
Finance Manager

Dr. Kwame Shanaube,
Deputy Director of Research -Quantitative

Dr. Musonda Simwinga,
Deputy Director of Research - Qualitative, Zambart

Dr. Ginny Bond,
Head - Social Science, and Professional Development

Ab Schaap,
Head- Data and Statistics

Barry Kosloff,
Head Zambart Laboratories

Girish Nair,
Internal Audit Consultant

Gilbert Jikubi,
Human Resources Manager

Board of Directors

Dr. Charles Michelo (B.Sc. MBChB, MPH, MBA, PhD)
Board Chair

Professor of Epidemiology and Founding Dean at School of Public Health, University of Zambia (UNZA). His research interest that started with focus on HIV surveillance systems has evolved to include medical education as well as wider aspect of health systems but concentrated in maternal & adolescent health, metabolic disorders, disparities, and community health systems. This is evidenced by his wide publication record in peer reviewed and high impact journals in these areas arising from several research grants he has led. Furthermore, he doesn't only serve on various corporate entities and boards, but he has also been pivotal in transforming public health training and practice in Zambia by helping other Universities get established, he also pioneered the development of the first ever School of Public Health in Zambia, hosted at UNZA. Through this he has supervised and mentored several masters, doctoral and post-doctoral candidates. He possesses a rare and unique combination of management as well as public health technical skill mix.

Mr. Chibamba Kanyama
Board Member

A Zambian Citizen; Corporate Leader; public speaker; Communications specialist and strategist; Published Author (Business Values for Our Time (2010); Achievement Values for Young Adults (2011); Determinants of FDI in Sub-Saharan Africa (2012)). Also Television personality; Financial Advisor/Specialist; Advisor on Economic Policy; Economist and journalist. Prior to founding Bridges Limited, a consulting firm in 2017, Chibamba was with the International Monetary Fund, Washington DC, where he served as Communications Advisor (2014-2016). He also headed the Zambia National Broadcasting Corporation (Radio and Television) as Director General (2012-2014). Previously worked as Corporate Affairs and Marketing Director for Zambia State Insurance Corporation Limited (2002-2008), Director of Corporate Affairs at SABMiller plc/ Coca-Cola -Zambia (2008-2012). Since 2004, Mr. Kanyama has been a business columnist in Zambia's leading newspaper (The Post) and now News Diggers. He is Founder and Chairman of Teen Vision Trust Zambia (which hosts annual Creating the Future conferences for nearly 2,500 youths and mentors over 10,000 young Zambians in areas of business, finance, personal development and careers). Awarded Chevening scholarship by the British Government in 2000/2001 to study MSc Development Finance- University of Reading. Also holder of BA Mass Communications/ Economics (University of Zambia). Graduate of the Accelerated Leadership Program (BIT- University of Pretoria; South Africa), Cambridge Institute for Sustainability Leadership (SABMiller Plc/University of Cambridge). Chibamba is a certified trainer under The John Maxwell C. Maxwell Certification Program, certified coach under the Society for Organisation Learning (IMF sponsored) and Trainer of Trainers for the Institute of Directors- Zambia and is also a Fellow of the Institute.

Prof. Janet Seeley
Board Member

is Professor of Anthropology and Health at the London School of Hygiene and Tropical Medicine, partially seconded to the MRC/ UVRI and LSHTM Uganda Research Unit to lead the Social Science Programme, a post held

since 2008. She held the same position from 1989-1993, when the Unit was set up. Since 2014 she has also been `Faculty Lead for Social Science and Research Ethics' at the Africa Health Research Institute, KwaZulu-Natal, South Africa. She has been actively engaged in research on the social aspects of health, particularly HIV and AIDS, since 1987, working in sub-Saharan Africa and Asia.

Prof. Margaret C. Maimbolwa
Board Member

is a PhD nurse-midwife, a senior lecturer, researcher and consultant at the University Of Zambia School Of Nursing Sciences. As a former Assistant Dean- Undergraduate for then School of Medicine before it split into four schools, she oversaw and coordinated six different programmes including curricular submission and approval for the programmes. She is an expert in lecturing in Nursing and has taken part in many research projects within Zambia in relation to maternal, neonatal, and child survival. Prof. Maibolwa served as Country Coordinator and Principal Investigator for UNZA's Wellcome Trust-funded Southern Africa Consortium for Research Excellence (SACORE), a partnership with three low-income African universities, three middle-income African universities, and four well-established U.K. universities with very high-quality research environments and experience in capacity building in Africa. She is the Regional Chairperson and one of the founding members of the Africa Midwives Research Network which aims at capacity development of midwives for the Improved Maternal and Child Survival project, a partnership with seven countries in the region with technical support from Sida, Sweden, and also a Project Manager of the basic science and ancillary health care programs for the Medical Education Partnership Initiative (MEPI – R24), and Principal Investigator for Zambia for the QZA-0484-MW-13/300032 Grant. NORHED 2013 "Development of a novel Nursing and Midwifery Graduate and Postgraduate Training Programmer in Malawi, Zambia and Zimbabwe."

She is happy to serve as a mentor to School of Nursing Sciences PhD students who are supported by the **UNZA-Vanderbilt Training Partnership for HIV-NCD Research (UVP-2)**

grant and to work with the UVP team and other faculty members to add structure to UNZA's PhD Programme and its new postdoctoral fellowship programme.

Prof. Peter Godfrey-Faussett
Board Member

Professor of International Health and Infectious Diseases at the London School of Hygiene and Tropical Medicine. After training in general medicine and infectious diseases, Peter joined the London School as a clinical research fellow in 1989 and has been there ever since. During that time he moved to Lusaka from 1992-1998 to work with UNZA School of Medicine as a lecturer and researcher. His research interest on tuberculosis and HIV covers a wide range of disciplines from molecular genetics, through epidemiology and clinical trials to social science and implementation research. After returning to Europe, Peter has worked for several major international policy organisations including the World Health Organization, Global Fund against AIDS, Tuberculosis and Malaria and the United Nations Joint Programme on HIV and AIDS. He remains committed to using science and research as tools to improve the health and well-being of everyone with a strong commitment to equity, social justice and human rights as core values.

Mr. Morgan Mukwasa
Board Member

is a holder of a Bachelor of Laws Degree (LLB) from the University of Zambia and a Master of Laws Degree (LLM) in International Trade and Investment Law from the University of Pretoria. He also holds a Post Graduate Diploma in Legislative Drafting from the Zambia Institute of Advanced Legal Education (ZIALE).

He has been practicing law in Zambia for 15 years now. He worked in the Attorney General's Chambers for 8 years during which he held the positions of State Advocate, Assistant Senior State Advocate and Senior State Advocate.

Mr Mukwasa also worked as Corporation Secretary at the Zambia Forestry and Forest Industries Corporation Limited (ZAFFICO) for 4 years before joining Zambia Revenue Authority as Director Legal Services in May 2017. He is still serving as Director Legal Services at the Zambia Revenue Authority.

Chapter One:
Our work

Dr. Kwame Shanaube
Country Principal Investigator, TREATS

Studies: Current Studies

TREATS

Infection Cohort Report

The Incidence of TB Infection Cohort Study (Infection Cohort) of the TREATS project aims to compare the population impact of a combined TB/HIV intervention of population level screening for tuberculosis, combined with universal testing and treatment (UTT) for HIV on the incidence of infection with TB in a randomly selected cohort of adolescents and young adults (aged 15-24 years).

Study Design

In Zambia, a random sample of about 300 adolescents and young adults were recruited in 8 communities (total 2655). The study began in July 2018. Study activities included community engagement and invitation of participants to the clinic. At the clinic, informed consenting, collection of information on TB/HIV risk factors and TB symptoms took place. Symptomatic individuals had sputum tested using GeneXpert

MTB/RIF. All participants were offered HIV antibody testing. TB infection was determined with the use the QuantiFERON TB Gold-Plus test (QFT-Plus).

2020 Activities

- The study was in the follow phase and preparing for the last study visit.
- In May 2020, participants were contacted by phone and given feedback on the QFT-Plus test result and reminded about the pending yearly visit.
- From July –December 2020, the third and final yearly study visit was conducted at all the sites. Activities included participant follow-up, data collection and sample collection and testing.
- Participants were given back results of tests done during the final visit study in December 2020 and all sites closed out on Dec 31, 2020.
- **Challenges:** Cohort retention was a challenging as some participants had relocated out of the study area, or were in school or work.
- **Mitigation:** included repeated participant follow-up, home visits, transporting participants from home to the clinic as well as working over weekends. Members of both the adult and adolescent community advisory board were engaged to help enhance the retention process.

Prevalence Survey

2020 Activities

The prevalence survey of the TREATS study is measuring the impact of PopART interventions on the prevalence (old and new cases) of bacteriologically confirmed pulmonary TB in the former PopART intervention communities. The study will provide a comparison between the communities that received the PopART intervention with the communities that did not receive the intervention (standard of care communities).

The prevalence survey is a cross sectional survey targeting a population of participants aged 15 years and above residing in the former PopART communities. This is a large survey targeting a sample size of 4000 participants in Arm C communities and 2000 participants in Arm A and B communities where communities are divided into blocks that were randomly sampled until the targeted sample size is reached for that specific community.

Participation in the study is voluntary and eligible participants are invited to come to the mobile field sites (MFS) by way of an invitation card with a barcode. The barcode helps to identify participants at each station at the MFS and is mandatory for accessing the services.

The prevalence survey began in February 2019 in Lusaka, followed by Ndola in August 2019

Communities

The study is being conducted in 4 provinces in Zambia (Lusaka, Central, Copperbelt and Southern) in 12 communities: - Lusaka (Chipata, Chawama, Kanyama), Copperbelt (Chifubu, Chipulukusu, Ndeke, Chimwemwe), Central (Ngungu, Makululu) and Southern (Shampande, Dambwa, Maramba)

Methodology

The invited participants are invited to come to the MFS where further information about the study is provided and eligibility is confirmed before procedures commence. The MFS are centrally located in a community, where the OneStopTB Platform (a truck, containing a digital X-ray and Xpert® instrument) is stationed.

Participants aged 18 years and above provide written consent. Individuals below 18 years will provide written assent and will need written consent from their parent or guardian before participating in the study.

Community mobilization activities were conducted to sensitize community members.

Working in a pandemic

The survey continued in Kitwe from January to March 2020 when field activities were paused due to the COVID-19 in the country. Field activities resumed in Makululu, Kabwe on 21st September, 2020 and were completed on 02nd November, 2020. We then started Ngungu

community on 18th November, 2020 were we plan to complete field activities by the end of February 2021.

The COVID pandemic affected the study timeline and field teams had to adjust to working under the COVID-19 guidelines. Field activities were conducted following strict COVID-19 measures. All field staff are required to wear masks at all times, disinfect working stations, wash hands and sanitize as often as possible.

Participants without face masks were provided with masks upon arrival at the MFS and also directed to wash hands at the waiting station before proceeding with study procedures. Physical distancing was also observed.

As we are working during the pandemic, COVID 19 test kits are being procured to enable us test all field staff on a weekly basis and also to ensure that field work was not disrupted.

Team members that tested positive to COVID 19 were required to isolate for 14 days according to COVID 19 guidelines/Zambart SOP.

Sub study - PX

Introduction

The use of phylogenetic analysis in HIV prevention trials is relatively novel. Investigators have recently used phylogenetic methods to analyse transmission linkages in HIV prevention trials, for example estimating the amount of transmission that crosses community boundaries. In addition phylogenetic analysis can also be used to identify risk factors associated with HIV transmission (such as age), and evaluate the prevalence and spread of antiretroviral drug resistance.

The HPTN 071-2 (Phylogenetic study), an ancillary study to the recently ended HPTN 071 (PopART) trial, was designed to address factors that are hypothesized to affect the outcome of the trial. This includes the role of acute and early HIV infection in transmission and the role of transmitted antiretroviral drug resistance. During this study, samples from venous blood collected for routine CD4 count testing for HIV monitoring during the PopART trial was used for phylogenetic analysis to generate HIV viral sequence

Why carry out the Px study alongside TREATS?

We want to understand PopART intervention results, understand HIV viral load and transmission patterns in the community, use this information to guide future HIV programmes and interventions, and to evaluate the efficacy and feasibility of using low volume capillary blood samples compared with venous blood samples for performing:

- HIV sequencing
- Viral load quantification
- Antiretroviral drug resistance testing
- Recency of infection testing
- HBV, HCV, HSV detection

Participant eligibility

Participation in the study is open to all who reside within the TREATS TBPS communities in Zambia and SA, have signed informed consent and are HIV positive, either self-reported or newly diagnosed at HTS

Every eligible participant provides informed consent to participate in the study, completes a questionnaire and gives a capillary blood sample of 0.5mls in the Microtainer.

Sites

The study was conducted in Ndeke and Chimwemwe (Kitwe), Chifubu and Chipulukusu (Ndola) and Ngungu and Makululu (Kabwe) from January 2020 and this will go on until April 2021.

Samples collected: February 2019 – December 2020

Site	Arm	Duration per site	Known HIV+ Enrolled	Total number of blood samples collected
Chawama	C	18-Feb-19 to 12-Aug-19	575	312
Chipata	A	18-Feb-19 to 18-Jul-19	444	174
Kanyama	B	22-Jul-19 to 29-Sep-19	376	179
Chifubu	C	26-Aug-19 to 19-Dec-19	634	585
Chipulukusu	A	23-Sep-19 to 04-Dec-19	287	285
Chimwemwe	B	20-Jan-20 to 07-Mar-20	254	238
Ndeke	A	20-Jan-20 to 19-Mar-20	284	249
Makululu	B	21-Sep-20 to 10-Nov-20	385	364
Ngungu	C	21-Sep-20 to 31- Dec- 20	356	328

Challenges

HIV positive individuals in the TREATS TBPS study refused to participate in Px. Another challenge was that participants were asking to receive the results personally and not at the community level as per study design.

Conducting fieldwork during the rainy season was also very challenging.

Looking ahead in 2021

The study will also be conducted in Shampande, Dambwa and Maramba TBPS sites.

The Intensive Diagnostic Phase Follows Up (IDPFU)

Background

The Intensive Diagnostic Phase Follows up (IDPFU) was conducted in three Lusaka communities, namely Chipata, Chawama and Kanyama. The aim of the IDPFU was to gain more insight in the patient pathway of participants who were diagnosed with TB during the TREATS prevalence survey. It therefore aimed to assess if those participants that needed care and treatment at the IDP actually received it. It also aimed to understand the microbiological, clinical and radiological progression or changes over time in those participants that were MTB positive or had a unexplained high CAD scores. Lastly the IDPFU aimed assess the feasibility of implementing the DELFT portable backpack X-ray in the community.

Study Activities

- A structed questionnaire administrated to all participants.
- HIV testing offered to those who were HIV negative or unknown HIV status
- Capillary blood collection from all HIV positive participants, the blood was used as part of the phylogenetic study.
- Sputum collection from all TB symptomatic participants
- A chest X-ray for all participants.

Study progress

The study started seven months after the initial IDP and began in early February and was completed by end of March 2020. It was conducted in 3 communities in Lusaka province where the IDP took place.

The eligibility criteria to participate was, to have participated in the IDP and be MTB positive , thus defined as being positive either in S1/S2 Xpert result and/or positive in S3 Xpert or culture, considering trace as positive. And also those participants with unexplained high CAD score over 70 on their CXR and MTB negative.

Community mobilization preceded the study and TREATS staff went in the communities and households providing information on the IDP follow up study. Stakeholder meetings took place with health facility staff and Community Advisory Boards.

Participants that were eligible to participate in the IDPFU were listed and their household plotted in the map so they could be visited. Once we contacted the participants and confirmed their identity, we cconducted the informed consent process and provided them with an invitation card in which we ticked and checked the procedures they had gone through. The questionnaire was done at the household and then we scheduled appointments for them to come and get their CXR done and sputum sample if eligible.

The finger stick capillary collection was done as in the TREATS TB prevalence survey communities but was not conducted in initial IDP. Mental health questions were also introduced by the qualitative research team.

Lessons Learned

- High acceptance from IDP participants to enrol and participate in the IDP-FU
- Referral to health care needs to be emphasized in those cases that require care and treatment
- Location of participants can be challenging
- Find appropriate locations in the community for portable X-ray
- Clinical panel revision and decisions can be complex

Data Analysis

Data analysis is ongoing which will give us an understanding of the changes or progression of clinical, microbiological and radiological features of cases over time.

COVID Study Update

TREATS-COVID study) is well placed to answer some of the most critical questions relating to the epidemiology of the (Severe Acute Respiratory Syndrome Corona Virus 2) SARS-CoV-2 virus in a typical urban town in Africa. The objective of this study is to measure the prevalence and spread of SARS-CoV-2 in Zambia, working with one urban community and extrapolating to the wider population using mathematical modelling. We aim to conduct epidemiological and social science inquiry that will improve our understanding of SARS-CoV-2 transmissibility, susceptibility, disease severity, and risk factors and the inter-relationship between SARS-CoV-2 and TB/HIV. The TREATS-COVID study will be embedded in the ongoing EDCTP clinical trial called Tuberculosis Reduction through Expanded Antiretroviral Treatment TB Screening (TREATS). It optimizes existing capacity and resources thereby enabling a rapid start-up of activities while at the same time creating a unique opportunity to investigate the interaction of COVID-19 with both TB and HIV.

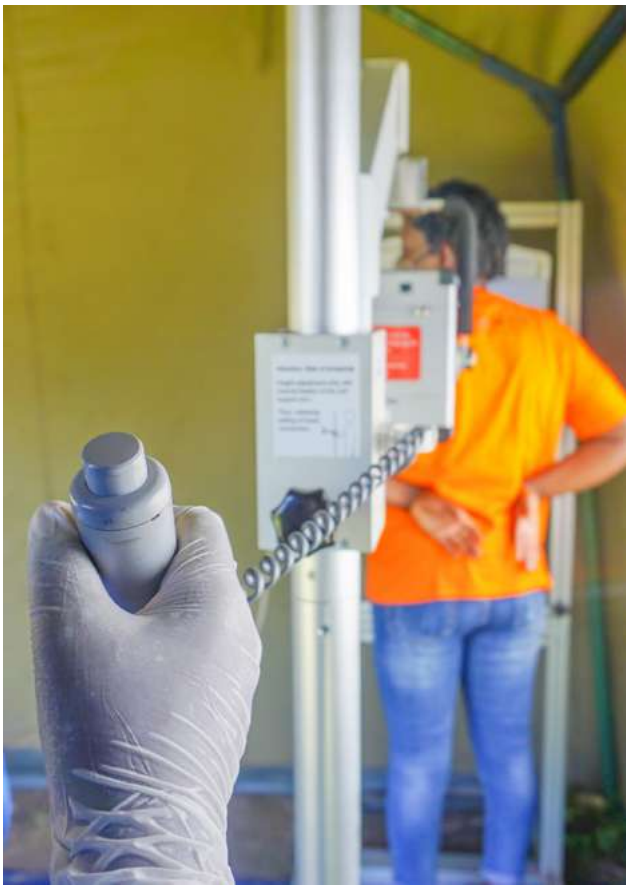
The overall target population is the entire population of the selected urban community (n=28,000 approximately). We will conduct SARS-CoV-2 prevalence surveys in a random selection of adults (15 years and above) throughout the duration of the study. We followed up household contacts of COVID-19 cases to conduct contact tracing at 14 days, 28 days and 90 days after the first visit.

Study progress

The TREATS COVID-19 study will be conducted from June 2020 to December 2021. Field work commenced in October 2020 in a catchment area consisting of 20 sample areas. As at December 2020, 18 sample areas were covered with 2 remaining.

12,954 individuals were enumerated. A change in the perception of COVID-19 was observed in the community while COVID-19 screening and linkage to care continued. Screening was also conducted other diseases other than COVID-19 e.g. TB, HIV and Malaria.

A number of challenges were experienced during this period. It was noted that household members present during a visit from TREATS COVID-19 staff withheld study information from absent household members. Participants also gave false personal information e.g. phone numbers and would pretend to have moved away from the community.



The absence of responsible adults in the households and failure of some Covid-19 positive participants to go into isolation was also an issue. Some participants visiting the clinical tent did not want to wait their turn to access our services. It was also challenging to find COVID-19 contacts to our index cases. It was also challenging to work with incomplete research teams due to self-isolation

The second phase of TREATS-COVID study

- Overall aim: To mitigate the impact of the COVID-19 epidemic in Lesotho and Zambia by improving the COVID-19 trace-screen-test-isolate cascade through eHealth-supported community-based testing, utilization of rapid diagnostic tests and self-collection of swabs.
- Preparations are underway and community work will start in April 2021.

The second phase will last up to 2022

TB Drug Resistance Survey (DRS)

Background

Zambart was contracted by the Ministry of Health to conduct the 2019 – 2020 TB Drug Resistance survey under Contract number MOH/SP/010/18. The duration of the survey was set at 15 months with the draft report due by early December 2020 and the final report due at the end of December 2020.

The 2019-2020 National TB DRS is the third to be conducted in Zambia. The primary objective of the survey was to determine the levels and pattern of resistance to first-line anti-TB drugs in newly diagnosed and previously treated bacteriologically confirmed pulmonary TB cases in Zambia.

Other objectives of the current survey include:

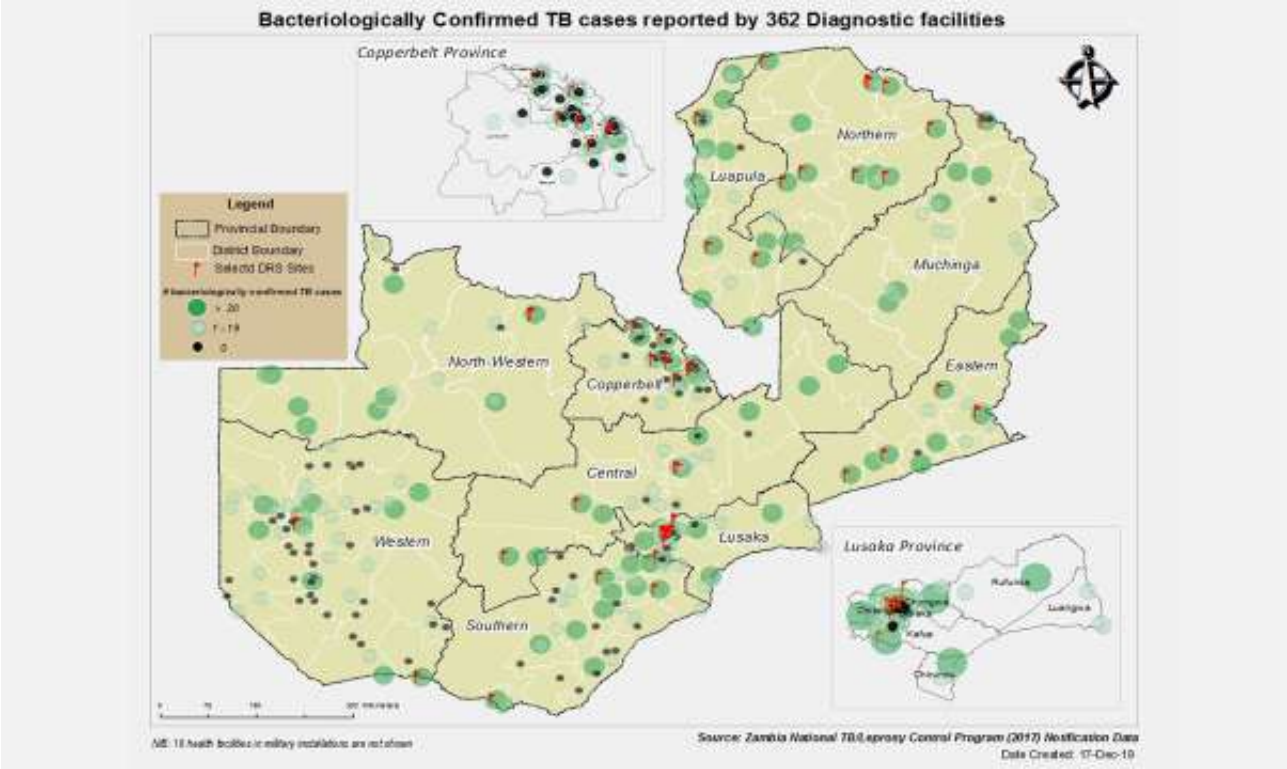
- to determine the proportions and patterns of drug resistance to fluoroquinolones and second-line injectable agents (with focus on Amikacin and streptomycin) among patients with confirmed MDR-TB (TB resistant to Rifampicin and Isoniazid)
- to determine the associations between drug resistance and socio-demographic or clinical characteristics such as age, sex, or HIV status; to describe drug resistance trends over time compared to the 2001 and 2008 DRS
- to determine concordance between phenotypic TB drug susceptibility testing and LPA
- to conduct whole genome sequencing on any case of drug resistant TB in order to find additional genetic mutations.
- The first TB DRS was conducted in 2000 and the second one in 2008.

Study Implementation

The 2019-2020 Tuberculosis Drug Resistance Survey (TB DRS) implementation of the survey began in September 2019 following approval of the protocol by the University of Zambia Bioethics Review Committee (UNZABREC) and the National Health Research Authority (NHRA). The target sample size was 1100 and a total of 50 clusters were randomly selected from 47 diagnostic centres across Zambia, with three diagnostic centres recruiting two clusters each.

Staff from each selected diagnostic centre, comprising the (list them), were trained in the survey methodolgy and sample collection began immediately after the training. Provincial trainings took place on a rolling basis.

Sputum samples were couriered to the Zambart Central Laboratory by the Dezalu Courier Company for processing. Laboratory results were signed off by Zambart Lab Management and Study PI. All results (LPA / MTBDR plus



and culture) were verified, printed, approved and sent to the diagnostic centre staff and District TB Program Officers. Each result form had treatment recommendations for diagnostic centre staff to follow.

Survey data was collected using an electronic data capture device and all data was uploaded to the Zambart server on an ongoing basis.

Participant recruitment was completed by the end of October 2020 and a total of 1066 participants were recruited.

Next Steps

The COVID 19 pandemic negatively affected the ability of Zambart to conduct the genotyping of the samples showing any drug resistance due to the inability to obtain the needed reagents. An external laboratory will be contracted to carry out this aspect of the survey. The Uganda Supranational Reference Laboratory will conduct Quality Assurance for the survey. It is

anticipated that the final results will be available in 2021.

USAID Eradicate TB (ETB) Project

Zambart is one of the four (4) consortium members of the five-year (2017 -2022) USAID sponsored Eradicate TB (ETB) Project. The lead partner on this project is PATH-Zambia. Zambart's role on this project is to build the capacity of MoH provincial and district-level staff to conduct operational research (OR) on TB service delivery within their local context. Two Zambart staff are working on the ETB project.

In 2021, ETB supported 10 Ministry of Health staff to conduct operational research in five districts. Four of the five districts (Mpongwe, Kitwe, Itezhi-Tezhi and Chililabombwe) successfully concluded implementation of their studies by October 2020. Table1 below highlights the titles and key findings of the four studies. Results from all the four studies were disseminated at district and national level meetings. ETB will in 2020 support the four districts to prepare manuscripts on their studies and submit them to pear reviewed journals for publication.

At national level, Zambart ETB staff actively participated in the organization of the national health research conference. They also actively participated in developing a research proposal for a nation-wide study to investigate the problem of high mortality among TB patients.

Like many other projects at Zambart, the ETB project was also negatively impacted by COVID-19 outbreak in the country. A number of activities were either cancelled or postponed.

Table 1: Operational studies completed in 2020 under the Eradicate TB Projects

District	Study title	Key findings/gaps identified
Itezhi-Itezhi	Tuberculosis mortality in Itezhi-tezhi District of Zambia: patient characteristics, causes and time to death	Higher risk of mortality among clinically diagnosed TB patients, compared to bacteriologically confirmed patient.
Chililabombwe	An assessment of adherence to recommended sputum examination schedule during tuberculosis treatment in Chililabombwe District, Zambia	Nearly one third(27%) of bacteriologically confirmed paumonary TB patients did not undergo all the recommended sputum follow-up examinations
Kitwe	ow Childhood TB Patient Notifications in Kitwe District, Zambia: Knowledge, attitudes and practices among health care workers.	Majority (93%) of children that attended out-patient departments (OPD) with respiratory symptoms in the first half of 2019 not screened for TB
Mpongwe	Investigation of losses long the sputum sample referral cascade in a rural setting, Mpongwe District, Zambia	11.6% of sputum samples referred from non-diagnostic centres to the diagnostic centre between January and June 2019 were lost along the sputum referral cascade.

Figure 1: Zambart staff Dr Alwyn Mwinga and Josphat Bwembya supporting operational research trainees from Kitwe DHO (Sharon Musankanya, Jane Phiri, Carol Chibwe, and Dr Naomi Kasanda) to explore their data during a data analysis workshop held in Lusaka in August

Yathu Yathu 2020 report

The Yathu Yathu study is a two-arm pragmatic cluster-randomised trial to explore whether the implementation of the "Yathu Yathu" model of community-based peer-led delivery of a comprehensive package of SRH services, including HIV testing and linkage to prevention and treatment, incentivised using an innovative "prevention points" scheme and SMS-based peer support, increases uptake of HIV testing and SRH services in a real-world setting.

An embedded mixed-method process evaluation will provide evidence of service acceptability, feasibility, and of AYP experiences with services. An economic evaluation will provide evidence of the costs and cost-effectiveness of the intervention package. Through these methods, this study will provide a rigorous and comprehensive evidence-base of whether Yathu Yathu can increase AYP access to SRH, thereby contributing to their health and well-being.

The study is being conducted in two communities in Lusaka, Zambia called Chipata and Kanyama. The communities have been divided into 20 geographical clusters, 10 intervention clusters and 10 control clusters.

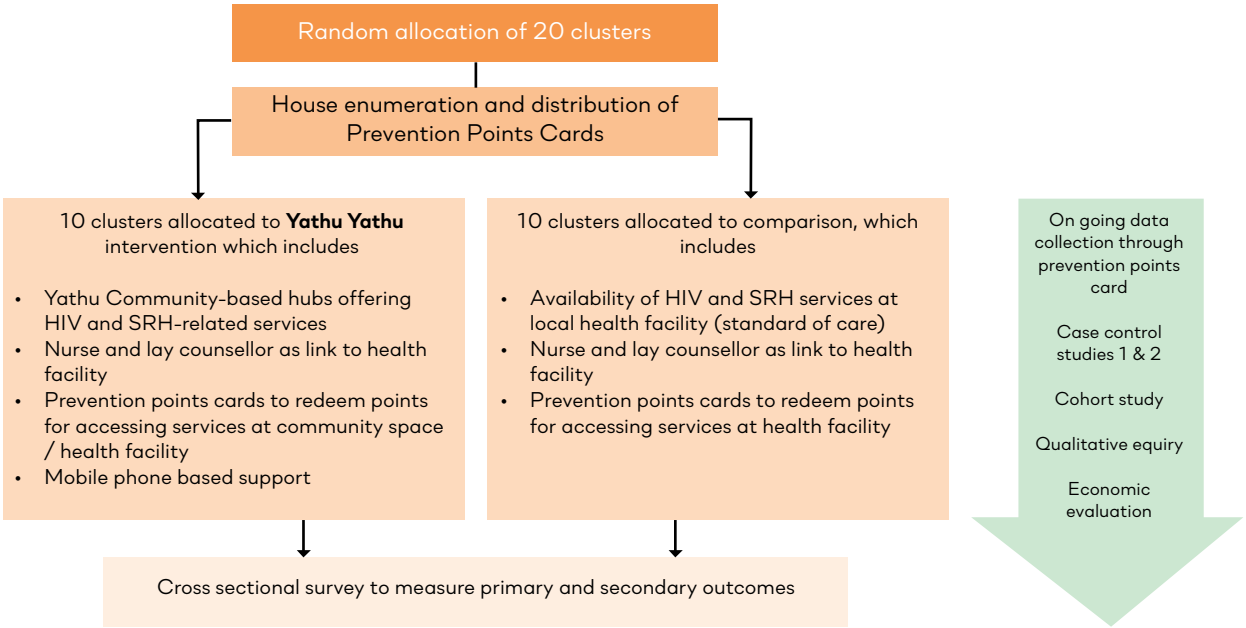


Figure 1: study design of the Yathu Yathu cluster-randomised Trial

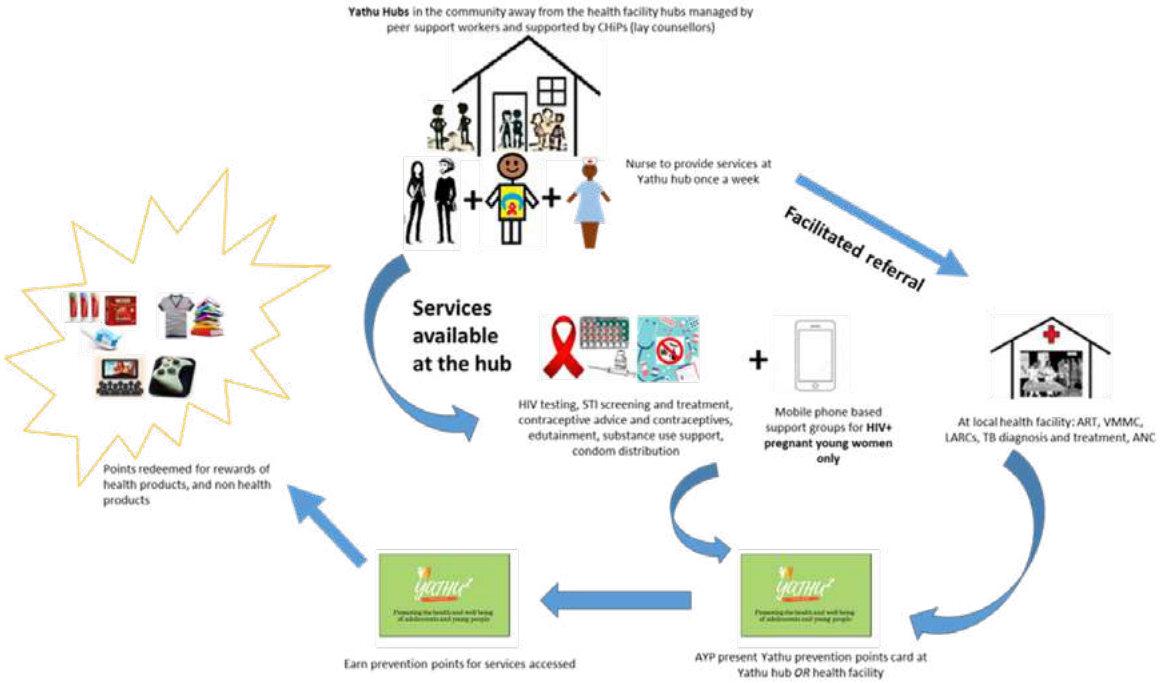


Figure 2: Description of the Yathu Yathu Intervention

The implementation began in September 2019 with a pilot phase and enumeration of participants. Enumeration included participants consenting to be part of the intervention. This pilot phase ran from September 2019- January 2020. Thereafter, using pilot phase quantitative and qualitative data, adaptations were made to the intervention to ensure any gaps in who was reached with the intervention were addressed. However, soon after the adaptations, due to country-wide incidences of "gassings", it resulted in the hubs being closed on a temporary basis for 7-10 days. This was in an effort to ensure the safety of staff and participants as there were reports of violence.

Soon after, in March 2020, Zambia reported its first cases of the SARS-CoV-2(COVID-19) virus. This was just after the World Health organisation declared it a global emergency. This resulted in initial changes to service provision and development of a study contingency plan. The increasing cases in the country eventually resulted in the closure of the

hubs for three months from April-June 2020. This also resulted in adaptation of service delivery to use of social media to provide comprehensive sexuality education sessions via social media (Facebook and WhatApp).

The implementation resumed in July 2020 under strict infection control guidelines to ensure delivery of services in a manner that protected both the staff and the participants from COVID-19 infection. In September, the study had its annual Trial Steering Committee meeting which was held virtually due to COVID-19 restrictions. The meeting was successful and the Chair of the committee commended the study team for the work and the COVID-19 response. The committee members also agreed to a proposed extension of the study in response to the COVID-19 closures. As such the study period was extended or 6-months after permission was sought and granted from the funder. In December 2020, we also had the pleasure of hosting the Assistant Director of Adolescent Health from the Ministry of Health, Dr Simpungwe Kakungu. She was impressed with the services we provided and requested our input into how the model could be taken forward by the Ministry of Health. Additionally, the Public Health Specialist from Chipata and Kanyama districts also visited our hubs and were happy with our services. (pictures are in Yathu Yathu Drive and on Facebook to add here).

In 2021, implementation of the intervention is planned until June 2021. Thereafter, we will begin the evaluation of the study through a cross-sectional survey. The survey is set to begin in the April 2021 and will run until July 2021. Dissemination of the main study results is expected to be in October 2021.

The Yathu Yathu Intervention Coordinator with hub staff during her routine technical support to visit the hubs

The Yathu Yathu Community Mobilzer explaining the Yathu Yathu zones and hub locations

Departments

Social Science Unit

Dr. Ginny Bond

Head - Social Science, and Professional Development

Areas of Interest: Zambart's social science unit currently maintains a strong track record in: HIV, TB, adolescent health (including adolescents living with HIV), disability, community engagement in applied public health research, health-related stigma, social science and community engagement components of community-randomised trials, and particular qualitative methods (Broad Brush Surveys, participatory techniques and ethnography). Emerging areas of interest for the Unit include: mental health, water and sanitation, female genital schistosomiasis and prostate cancer. The community engagement team is part of the Unit and the two disciplinary areas continue to work closely in many grants.

Unexpected events – Gassing incidents, COVID-19 Adjustments: Prior to COVID-19, early in 2020, we faced a bizarre series of reported gassing attacks across Zambia that stopped some of our research activities for short periods as any community outsider was vulnerable during local gassing incidents. This had died down by March 2020. However, as with other work at Zambart, 2020 was a year that was dominated by the COVID-19 pandemic with new grants in particular being affected. For example, when the pandemic first reached Zambia, we decided to move more slowly with new grants and held off recruiting new staff, conducting fieldwork, and applied for extensions to grant timelines where necessary. Three studies obtained no-cost extensions due to the pandemic. We also adapted to more remote working as a Unit, both in relation to working from home and collecting data remotely. Working from home for some staff was more challenging and there were often some social science staff who still needed to come into the head office. Remote methods of working were interesting and innovative and brought us into contact with other colleagues in the region and beyond who were thinking how best to adapt to remote data collection. Musonda Simwinga was involved in a LSHTM presentation critically reflecting on remote data collection and co-

authored in a subsequent publication focusing on this.

New grants: The unit was awarded four new grants in 2020 that were specific to social science, two scholarships, and was part of four new interdisciplinary grants. Details of the grants is given below. The grants that were specific to social science were on community engagement and TB, Female Genital Schistosomiasis, water and sanitation, and prostate cancer. The scholarships were awarded from HPTN to Bwalya Chiti and from the PANGEA consortium to Melvin Simuyaba for further analysis of social science PopART data, working with international networks/consortiums to lead on manuscripts and hone their analysis and writing skills. The interdisciplinary grants were two COVID-19 grants and two analysis grants focusing on HPTN 071 stigma data and HPTN 071 (PopART) data. In addition, involvement in a PhD programme run by a disability consortium at LSHTM led to us to be part of a multi-country study of the impact of COVID-19 on people with disability. The funders supporting the new grants include: BMGF, DFID (through the Neglected Tropical Disease Task Force, the British Academy and LSHTM), NIH (through HPTN), EDCTP, the Botnar Foundation and Wellcome (through the Institutional Strategic Support Fund at LSHTM).

Continued funding: The Unit continued to work on grants in the areas of adolescent sexual and reproductive health, HIV self-testing, tuberculosis, mental health, and poverty dynamics.

Institutional collaborations: This year saw us develop some new collaborations within Zambia – most notably with the School of Engineering at UNZA and the Cancer Research Institute at UTH. We also contributed actively to strengthening our relationship with the School of Public Health at UNZA. Beyond new Zambian collaborations, we also developed new international collaborations in the sub-Saharan African region and in Europe. The former includes the School of Engineering at the University of Stellenbosch in South Africa, the Blantyre Institute for Community Outreach (BICO) in Malawi, the Catholic Institute for Health and Allied Sciences/ Bugando Medical Centre in Tanzania and the Ugandan Virus Research Unit (MRC). Our new European collaboration is the Engineering Department at the University of Sheffield. Established Zambian collaborations of note to social science, other than the interdisciplinary grant collaborations, include the Institute for Economics and Social Research (INESOR) at UNZA, the School of Nursing at UNZA, the Department of Psychology at UNZA, the Indaba Agriculture Policy Research Institute (IAPRI), the Southern African Institute for Policy Research (SAIPAR), the Desmond Tutu TB Centre at the University of Stellenbosch and the Overseas Development Institute in the UK. Our closest institutional collaboration as a Unit remains the Department of Global Health and Development, Faculty of Public Health and

Policy at LSHTM where Ginny (Virginia) Bond is based and the Faculty of Infectious Diseases at LSHTM.

Capacity building: At the end of the year, Virginia Bond, LSHTM overseas staff (based at Zambart since 1999) and currently head of the Unit, was promoted to Professor of Anthropology and Public Health at LSHTM. Her promotion builds on successful team work at Zambart, both within the Unit and with other disciplines, and is a feather in Zambart's cap. Other than the HPTN and Pangea scholarships, Musonda Simwinga was awarded an EDCTP fellowship consolidating his professional development as an African scholar specialising in community engagement (this is detailed under community engagement). Two staff (Madalitso Mbewe and Rhoda Ndubani) also submitted their Masters dissertations to the University of Western Cape and the University of Lusaka based on social science data collected under P-ART-Y and PopART. Tila Mainga, a social science LSHTM PhD student, was close to upgrading by the end of the year. Queen Seketi, a social science UNZA PhD student who is a person with a disability, was recruited by May 2020 as part of a PhD programme run by a disability consortium (PENDA) at LSHTM with the University of Makere in Uganda and the University of Nairobi in Kenya. Queen focused on working towards her PhD proposal for UNZA as well as a multi-country study of the impact of COVID-19 on people with disability. By the end of the year, we were close to recruiting three new social science staff; a study manager for the FGS study and two new graduates (social science and engineering graduates) for the water and sanitation grant.

Continued Grants

TREATS Social Science Activities

The qualitative component of TREATS aimed to describe experiences of diagnosed TB patients, and the general understanding of TB and TB stigma. Data collection occurred late 2018 and early 2019 through the use of focus group discussions with Neighbourhood Health Committees (NHC) (n=96) and stakeholders working in the field of TB (n=57) and in-depth interviews (IDIs') with TB health workers (n=9) and former TB patients (n=80). For the year 2020, the TREATS social science activities revolved around qualitative data analysis and drafting of manuscripts as part of the TREATS deliverables. We shared our preliminary findings during the TREATS 2020 annual meeting. The team collectively worked on the three manuscripts on: TB and mental distress, recurrent TB and social isolation experiences of TB patients.

Stigma Ancillary Study

The Zambart social science team is involved in further analysis of the HPTN 071a PopART stigma ancillary study data. The stigma ancillary study was completed in 2019 and an analysis grant allowed us to focus on key manuscripts, preparing for a webinar series, and a stigma network. The combined evidence will help to develop recommendations to strengthen HIV treatment and prevention programmes. In 2020, the team's analysis focused on: the impact of the PopART intervention on HIV stigma among people living with HIV, community members and health workers in Zambia and South Africa; the relationship between viral suppression and HIV stigma; qualitative stigma narratives in the era of Universal Test and Treatment; the transgender community and HIV stigma; and the profile of CHiPs (trial specific community health workers) in the delivery of PopART door-to-door services.

SEPO III

This study focused on best practices of programmes for young people living with HIV in Zambia, and fieldwork in seven programmes was conducted and disseminated in 2019. In 2020, colleagues in Canada and Zambia worked on the analysis of the self-management framework and the usefulness of this framework for programmes for young people living with HIV.

Zambia Poverty Dynamics

Zambart is leading the qualitative component of this mixed methods consultancy on poverty dynamics in Zambia. The focus in 2020 was completing data collection early in the year followed by the analysis of the extensive qualitative data from nine provinces in Zambia and presenting this data to international and national forums.

Yathu Yathu qualitative research

Following intensive fieldwork activities of data

collection towards the end of 2019, qualitative research activities for the Yathu Yathu study in 2020 began with a focus on data processing (verbatim transcription of audio recordings of focus group discussions with adolescents and young people (AYP) and writing summary matrix tables for the same discussions). Data collection plans were delayed by community unrest resulting from the reported gassing incidences in the study communities. Towards the end of the first quarter of 2020 (early to mid-March), we enrolled some AYP in a qualitative cohort and conducted the first interviews with them. However, we were unable to complete this activity and execute others as planned due to COVID-19. Following reports of the first few cases of COVID-19 in Zambia and a subsequent rise in the numbers of cases, the Yathu Yathu study leadership took measures to prevent the spread of the virus by halting all fieldwork activities and allowing staff to work from home. While we could not carry out fieldwork activities, we focused on data processing and analysis. In order to keep up with our planned activities, we opted to conduct the second round of the qualitative cohort interviews via phone. Being the first time to use this approach, we informed the ethics committee of our intentions, justifying why we needed to collect data using the phone unlike face-to-face interviews as planned and provided them with the verbal consent form for the qualitative cohort participants to be interviewed via phone. While the situation with regard to covid-19 was challenging, we learnt that qualitative data can also be collected remotely and this is something that we could consider in future. Once the fieldwork activities resumed, we were able to conduct the rest of the planned activities including, completion of the qualitative cohort recruitment and interviews, in-depth interviews, observations, focus group discussions and the mystery shopper's activities.

Phone interviews in Yathu-Yathu

Conducting phone interviews is a useful way of collecting data in times of crises as with the COVID-19 pandemic and when the intended participants are not easily reachable. Although there are challenges with technology (poor network connection in some instances and lack of access to phones by some participants) and physical distance (inability to observe nonverbal communication cues and ensuring that the participant stays free from distraction during the interview), phone interviews provide a great platform that can be used to collect data. More studies should adopt this approach to data collection as it saves time and money provided all ethical guidelines are considered.

Multi-country Study on the Impact of COVID-19 on People with Disability

The PENDA consortium at LSHTM pivoted their existing work to design a study to carry out research across seven countries using in-depth interviews with key informants (people with disabilities and/or their caregivers and service providers), conducted remotely and when

possible face to face. Queen Seketi will conduct the research in Zambia and draw on some of the findings for her PhD. In 2020, the study focused on developing the tools, submitting for clearance and preparing for training.

New Grants

African Prostate Cancer-Disparities in Outcome Study Zambia (APC-DOZ).

This award focusses specifically on prostate cancer as an emerging health threat in sub-Saharan Africa with the aim of evaluating the health system, socioeconomic and clinical factors that impact public hospitals across Zambia to deliver affordable interventions that improve and reduce inequalities in prostate cancer outcomes. This short-term grant involves working with the Cancer Research Institute at the University Teaching Hospital, a new collaboration. In the grant we are: (i) carrying out a systematic review of the published and grey literature to understand "HOW" researchers have tried to assess cancer care systems in LMICs before; (ii) engaging a Delphi A 3 round Delphi process with clinical and health system research experts from Zambia and internationally, including surgeons, oncologists and community workers, to help to understand WHAT barriers (categorized within a "3 delays" lens) need to be specifically assessed in a cancer care system. In 2020, we focused on planning for the implementation in 2021.

Bringing Down Hurdles for Female Genital Schistosomiasis Access to Care: A Multi-Country Socio-Structural Integrated Approach to Developing A Community-Based Teaching Platform

The aim of the project is to see if female genital schistosomiasis (FGS) screening can be successfully promoted through a community-based teaching intervention that addresses socio-structural barriers (including stigma) and links to broader sexual and reproductive health (SRH) prevention services. This will be developed and piloted across three African countries, namely Malawi, Tanzania and Zambia, and in one site in each country, and is led by Zambart.

Under this study, we will: 1) collect qualitative baseline data to inform the design of community-based teaching intervention that will include community-based teaching methodology for and with girls, women and health workers that focuses on FGS, cervical cancer, HPV, HIV and STI prevention and anti-stigma education; 2) develop and pilot FGS stigma scales; 3) pilot the community-based intervention to significantly promote uptake of a comprehensive health visit for women that includes screening for FGS, HIV/STI testing, and cervical cancer screening.

In 2020, we submitted study protocol and ethical approvals for the observational component from in-country IRB Committees and the LSHTM Ethics Committee by November 2020. The study was involved in developing FGS competence guidelines with other international colleagues, recruited a study manager and worked on tools and a review of community education materials.

HIV Self-Testing - HISTAZU

This grant is evaluating HIV self-testing and involves working with the Ugandan Virus Research Institute. In 2020, the study manager visited the study sites to introduce the study and engage with various stakeholders, submitted ethics and prepared for training and fieldwork.

Urban Infrastructure and Well Being Study - Rapid assessment of urban communities to optimise PH Interventions: water infrastructure in sub-Saharan Africa (RINSS)

Participating institutions include Zambart, LSHTM, University of Zambia School of Engineering, Desmond Tutu TB center, University of Stellenbosch School of Engineering, and University of Sheffield. The team is comprised of social scientists from multiple disciplines, public health, and engineering including civil engineering, urban water systems, drinking water quality and sanitation. This study represents the first collaboration of an interdisciplinary team to apply Broad Brush Survey (BBS) to water and sanitation and to work with engineers.

The BBS will be used to rapidly assess and demonstrate how similarities and differences in local context relevant to water and sanitation infrastructure development across four urban

communities in Zambia and South Africa. Alongside this adaptation of the BBS to WASH, we will produce a manual and interactive resources that can be adapted to different urban city problems.

The activities of the study in 2020 were focused on liaising with stakeholders, identifying the study communities, adapting the BBS tools, submitting ethics applications to all institutions, working on the manual, participating in British Academy workshops, the inception meeting and advertising for staff.

TREATS-COVID qualitative research activities

This new study was nested in the TREATS study in one urban community in Central Province in Zambia. We participated in the grant submission (conducted in a very tight timeframe), ethics application, developed tools, recruited a social scientist, conducted fieldwork and data analysis.

The initial social science activity was the Broad Brush Survey (BBS) conducted face to face in August 2020 by two social scientists. The BBS data was rapidly analyzed and written up for the wider team and stakeholders and disseminated to the community (see Ngungu-Bwacha BBS report). We shared our BBS findings with the district and national steering committee and internationally through a presentation at LSHTM and our European partners. Once the other TREATS-COVID activities started, qualitative evaluation activities were carried out of all research activities (the mobile field site, the clinical tent, the door-to-door enumeration). In weekly meetings we shared our results with the wider Zambian COVID-19 team to support implementation and challenges encountered in the field. We also documented the response to the first individual diagnosed COVID-19 positive by the study who was resident in the community in late November 2020.

Community Engagement

Engagement officer conducting Community Announcements

Introduction

Two major incidents defined the focus of community engagement activities in 2020. These are the COVID-19 pandemic and spraying of unknown chemicals by unknown people in homes and public institutions, which came to be known as 'gassing'. The CE team collaboratively worked with multiple community stakeholders to identify the best ways of engaging the community in the wake of the two events. In this report, we share how we adapted community engagement activities to respond to context, and the lessons we learned in the process. The studies under implementation during this period

included: Yathu Yathu, Tuberculosis Reduction through Expanded Antiretroviral Treatment TB Screening (TREATS) Study Work Package 2, Work Package P3 and Tuberculosis Reduction through Expanded Antiretroviral Treatment TB Screening TREATS-COVID Study.

Implementing Community Engagement During Covid-19

The Year 2020 was the most challenging when it came to conducting community engagement related activities to support the different studies that Zambart was conducting, and also to ensure ongoing conversations with community members. As with other components of ongoing studies, community engagement was obliged to adhere the Zambart and Ministry of Health COVID-19 guidelines to ensure the safety and wellbeing of study participants, staff and other community stakeholders. However, adherence to the guidelines also placed restrictions on how community engagement activities were conducted. This motivated the community and the community engagement team to think about new approaches.

Web-Based Platforms vs. face-to-face Meetings

The traditional one-on-one meetings were discouraged as they increased contact between people. We adopted internet-based platforms for meetings. Virtual meetings were held using web-based platforms like Zoom, WhatsApp and Facebook. Zoom virtual meetings were held with Community Advisory Board (CAB) members and some stakeholders. Because of the requirement for phones with amenable features and internet bundles, this platform was quite restrictive. WhatsApp groups were formed for CABs and these were used by the CABs to share important information in relation to studies being conducted in their respective communities. Study staff also used this platform to provide information and feedback to the CAB members. Images and documents like notices, posters and letters were shared in the WhatsApp groups.

Information, Education and Communication (IEC) and web-Based Platforms

The community engagement team spearheaded the production of posters, videos, brochures and key message leaflets. However, unlike in the ordinary days when these would be in print form and shared as hard copies, we shared the material on different web-based platforms like WhatsApp, Facebook, and YouTube. Most of the videos, particularly those produced for the Yathu Yathu study, a study providing HIV and Sexual and Reproductive Services (SRH) for young people by young people, were very popular. Even the International AIDs Society have been in touch requesting that we produce similar videos.

Teleconference meetings

Teleconference meetings were also held with community members and study staff. The community engagement team purchased

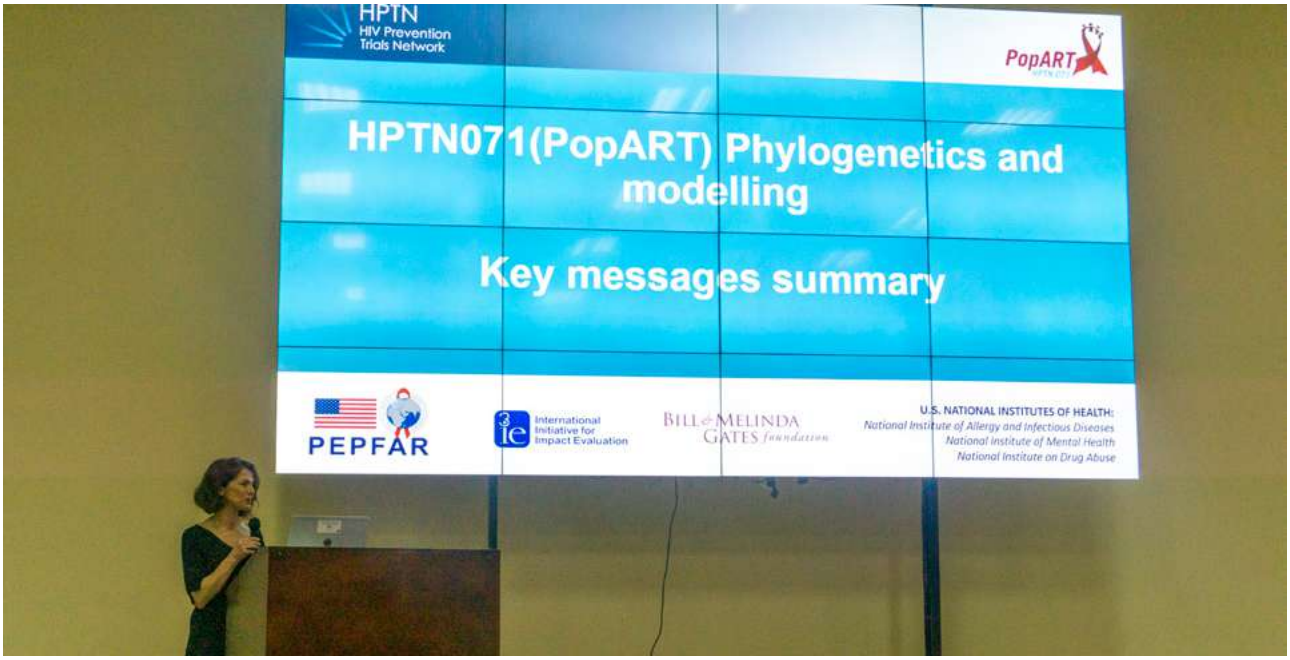
airtime for meeting invitees for them to use during meetings. Although a limit is placed on the number of participants who can be on one call, this platform was less restrictive as multiple teleconference meetings could be held.

Face to face and door to door sensitization meetings

Face to face and door to door sensitization meetings were conducted in isolated incidents. However, when done, the number of people who attended the meetings was small. All those invited were given a mask if they did not have one and they washed or sanitized their hands before entry or sitting down. All meetings were held outside to allow for good ventilation and social distancing. In addition, posters with messages on COVID-19 prevention measures were put up before meetings. A session on COVID 19 prevention was conducted before the core business of the meeting. The preferred community mobilization approach was community announcements using a vehicle-mounted with a megaphone. This was adopted to reduce contact between members of staff and community members.

Implementing Community Engagement During 'Gassing Period'

Between August 2019 and March 2020,



unknown people spread unknown chemicals in homes and public institutions. This began on the Copperbelt but quickly spread to other parts of the country including Lusaka. Consultative meetings were held with community stakeholders about possible suspension of the field activities. Stakeholders approached include the Ministry of Health, facility-based Public Health Specialists, regional and local police stations and the adult and adolescent CABs. One of the recommendations from the consultations was that field staff should not put on study uniforms but an immediate suspension of field activities was effected. The community engagement team again held discussions with various community members to assess the security situation before resumption of field activities.

Challenges And Lessons Learned

Adapting to new ways of communicating: the pandemic and gassing incidents provided community engagement an opportunity to try new engagement approaches although the choices between adults and Adolescents and Young People (AYP) varied. The young people preferred using Zoom for virtual meetings, while adults preferred teleconferences and WhatsApp group based meetings. It was easier to introduce AYPs to internet-based platforms, many of whom were already using these.

Impact on meeting attendance: more AYPs have smartphones as compared to adults. Some community members failed to attend meetings due to a lack of internet bundles. Sometimes, community members did not participate in meetings despite being provided with internet bundles. It was difficult to reach some community members on the phone as some of the calls went unanswered while others phones were off as they were not charged due to rationing of electricity in their respective areas by the power utility company.

Whose safety?: as the face of the studies, community engagement staff were often torn between strictly following COVID-19 guidelines and being available for community members for the time they were needed. In the end, maintenance of public health and safety of participants took precedence. However, this meant that some activities were hurriedly done. The 'personal touch' akin with interactions, and characteristic of community engagement waned. For instance, shaking of hands is one way of showing acceptance but this was no longer possible. Time for all forms of interactions and conversations were significantly reduced. Sometimes staff even feared getting on public transport to go to work. Therefore the suspension of field activities at the peak of the pandemic was welcome.

Overall, community engagement adapted and also learned to use new approaches which were added to the community engagement tool box. Therefore, these trying times also provided us with the opportunity to try new and cost effective ways for engaging community stakeholders.

DATA / ICT and Statistics

Ab Schaap
Head- Data and Statistics

The year 2020 was the year of the Coronavirus pandemic. In March 2020 the daily life and work changed for many people around the world and Zambart -staff were not excluded from the consequences of this pandemic. Studies were temporarily put on hold, offices were partly closed, we started working from home as much as possible, and we needed to get used to wearing face masks, keeping social distance, frequent hand-washing etc.(picture)

These unexpected events also asked some flexibility from our department. On one hand, since studies were suspended for some time, we could spend some more time on data cleaning and data analysis to support publications of papers, on the other hand because most people were working from home, we needed to facilitate the IT-infrastructure to working remotely. More than ever we had to rely on the quality of Internet connection to continue our daily activities as much as possible and the following were put in place to support remote working;

- Routers and USB powered MiFis were bought for data team to continue from home with data management activities
- Laptops were sourced to those who didn't have
- Increased allocation of talk time as most communication was done by phone
- Remote connection to our head office server. Despite the threat that might come with remote working we had to open up access to our network by using secure remote desktop software
- Meetings and on-line trainings were done using Zoom, a cloud-based video communications app that allows you to set up virtual video and audio conferencing, webinars, live chats, screen-sharing, and other collaborative capabilities.

But 2020 was also a year of opportunities. A COVID-study, looking at the cumulative incidence of COVID-19, was nested into the TREATS-TB prevalence survey in Ngungu. (Go to page x TREATS TBPS). Every household in Ngungu was visited and household members were screened for symptoms of COVID-19. Household members with symptoms were referred to the clinical tent. Non-

symptomatic participants were asked to report at the clinical tent if they developed symptoms in the future and depending on the location of residence some were invited to participate in the 'regular' TB-prevalence survey. Household members were possibly revisited in case a household member was diagnosed with COVID-19. (Picture)

This complex procedure was put in place to minimize the possible community transmission of SARS-CoV-2 as a result of our research activities.

The existing data collection tool for the TB-prevalence survey, developed by a company called iMarketing in Windhoek Namibia, needed to be changed to fit this unexpected purpose, a purpose it wasn't designed for at all. It is like asking a hammer to become a screw driver as well. To facilitate data collection at different locations in the community (clinical tent, health centre lab, regional lab, TBPS mobile field site) worked out well. The biggest challenge was to make that data available across the different locations. For example a participant was enrolled in the household, was referred to the clinical tent for a COVID PCR test and a sputum sample for the same participant was sent to the mobile field site truck for GenXpert (TB) testing. At all physical locations we needed to be able to recognize that this is the same person. At some locations we used laptop servers to support the data collection. The synchronization of data between these field servers, and between field servers and Zambart head office, was our biggest challenge in Ngungu community and needed much more attention from our data management staff than envisaged. But it also gave us the opportunity to learn lessons and use another IT-architecture for future studies.

Zambart Laboratories

Barry Kosloff
Head Zambart Laboratories

The Zambart laboratories have been involved in various laboratory activities spread across the five Regional laboratories in towns across the line of rail, and the two mobile laboratories. The Central Laboratory situated at Zambart House is the hub of all testing activities going on at the satellite laboratories.

The Zambart laboratory has the capacity to perform TB culture processing, identification and drug susceptibility testing, rapid tests and fourth generation testing for HIV and other immunological tests, CD4 Counts, plasma processing, QuantiFERON®TB Gold-Plus for TB infection, microscopy, and molecular based assays using GeneXpert® such as Xpert® MTB/RIF Ultra, HIV Viral Load and Xpert® Xpress for COVID-19 testing, and also recently added to molecular testing capacity is VitaPCR point-of-care test.

Some of the activities carried out during the year include the following:

TREATS Infection Cohort – Round 3

This was the final round of the Infection Cohort. Participant blood samples collected in the field and sent to the lab were incubated, processed and plasma stored in freezers at -80°C at both Zambart Regional Laboratories and Zambart Central Laboratory. All frozen plasma aliquots from regional laboratories were shipped to Central laboratory for QuantiFERON® TB Gold-Plus (QFT-Plus) ELISA assay testing once a month using a supplies truck which has battery-powered freezers installed to enable the shipping of frozen samples. The QFT-Plus ELISA assay is a test done on blood products to test for latent TB infection.

Data capture for all specimens received is done centrally in a sample registration database at Zambart House. QFT-Plus ELISA test results that had been quality controlled (Qced) and verified were imported from the lab on to a shared drive for the data team to extract and link with field data and proceed with subsequent analysis.

TREATS TB Prevalence Survey

The mobile labs moved to Kitwe between January – March 2020, and MFS were set up in Ndeke and Chimwemwe communities. Xpert testing for TB disease in the mobile labs continued for sputum eligible participants, and if any TB culture processing was required, samples were sent back to Central Lab in Lusaka. Trained lab staff would package the samples according to regulations and include techni ice packs in the boxes to keep the sputum samples cool during the transit.

Due to the COVID-19 pandemic, TBPS activities were suspended at the end of March up until September 2020 when activities resumed observing the stipulated safety guidelines for COVID-19 prevention measures. The mobile labs moved to Kabwe and initially set up in Makululu community until early November 2020. They relocated to Ngungu community during the third week of November scheduled to complete sometime in February 2021. All lab staff were required to wear masks at all times, disinfect working stations, wash hands and sanitize as often as possible. Mobile lab testing activities continued as before.

TREATS COVID Study

With the onset of the COVID-19 pandemic and increasing demand to study the novel disease, Zambart also embarked on COVID-19 research. The TREATS COVID team is based in Ngungu community and commenced activities in November 2020 and was initially running simultaneously with TBPS. The Clinical Tent which is the hub of the study activities is set up at Ngungu Clinic where Zambart has also partnered with the MoH laboratory at the clinic to carry out lab testing activities.

New tests and assays were introduced to Zambart laboratories which included blood plasma antibody testing using a fourth generation assay from Abbott performed using the ARCHITECT i2000SR instrument at Zambart Central Lab in Lusaka. Blood samples collected from participants in in Ngungu community during TBPS were processed for plasma at the Zambart Kabwe Regional Lab at Kabwe General Hospital. The stored frozen plasma samples were then sent to Lusaka for antibody testing. Xpert® Xpress testing for COVID-19 disease using GeneXpert® technology was done at both Central Lab and the Regional Labs. The VitaPCR™ assay from Credo Diagnostics in Taiwan, a point-of-care PCR assay set up at Ngungu Clinic Lab by Zambart, was also used to test for COVID-19 disease. Sample collection for both Xpert® Xpress and VitaPCR™ assays was via nasal and oropharyngeal swabs. The MoH lab also performed Full Blood Counts and Malaria rapid diagnostic testing for blood samples collected from participants. CRP (C-reactive protein) test used as an indicator for infection was performed at both the Clinical Tent and the MoH lab.

National TB Drug Resistance Survey

Recruitment of participants for TB DRS that commenced on 27th September 2019 continued and ended on 31 October 2020 and the last samples were collected.

Two sputum samples submitted from each survey participant were transported to the Zambart Central lab from the 47 randomised TB Diagnostic Centres across the country via a dedicated Courier system. The sputum samples were tested for TB disease and drug resistance first using which is a faster way of testing for TB disease and Rifampicin drug resistance. The samples were then subjected to TB culture processing for further identification of the disease causing agent and drug resistance testing for not only Rifampicin, but also other TB drugs which include Isoniazid, Ethambutol and Streptomycin.

Decontaminated sediments and cultures identified as positive for TB were stored in the freezer at -20°C. Some of the stored samples with identifiable drug resistance are to be subjected to sequencing at a later stage, and some will be sent to the Uganda Supranational Reference Laboratory (SRL) for EQA.

Laboratory Proficiency Testing

The Laboratory is also involved in annual Proficiency Testing activities for different lab assays and tests performed at Zambart Central lab and testing panels are received from the College of American Pathologists (CAP) and Uganda Supra-National Reference Laboratory (SRL).


TEST. TREAT.
TEST. TREAT.
TS FREE

Research Support Units

Research Governance

Research governance is the in house department that is charged with ensuring that all studies conducted by Zambart are of the highest integrity and quality. The department ensures that good research ethical practices are maintained. The department oversees training in research ethics, Good documentation practices, and Good clinical practices. The department is the focal contact between the researchers and the regulator/ECs and the sponsor appointed monitors and auditors''.

Major activities for the research governance department for 2020 were conducting routine monitoring and auditing of the studies being conducted by the various teams.

The department also developed flash cards for informed consenting and documentation practices that were given to study teams to assist them as they conducted these procedures.

The department reviewed and updated all training materials, mainly to reflect the necessary considerations for the current on-going pandemic

Three studies were trained in the listed subjects.

- Research ethics
- Good Clinical Practice
- Good Documentation Practice

Support visits

The TB prevalence survey treats study teams in Ndola; Kitwe and Kabwe received support visits. In these visits the RG Teams worked with the study teams and provided guidance and corrections to any issues that were noted during the visits.

Routine monitoring

The majority of monitoring visits was on the **TREATS** and the **TREATS COVID** study.

The following studies and sites were routinely monitored:

- **TREATS TB** Prevalence study sites i.e. Chipulukusu, Chifubu, Ndeke, Chimwemwe, Makululu, and Ngungu.
- **TREATS COVID** study sites Ngungu-Bwacha.

Monitoring activities included verification of data recorded and observations of procedures such as sputum collection and HIV testing.

All findings were presented to the study teams and any necessary corrective or preventative action was implemented.

Quality Assurance and Control procedures

To ensure that quality was maintained in all studies, dependant on the study, completed source documents received 10-100% Quality control checks so as to ensure completeness and

accuracy of the data collected.

All completed consent forms were logged on consent logs.

Archiving of closed studies is still on-going for all HPTN funded studies.i.e. All HPTN e.g. HPTN071, HPTN071-2, HPTN 071A, Community Art.

Health Economics Unit

Introduction

The Health Economics Unit (HEU) aims to contribute positively to the performance of health systems in Zambia and surrounding regions through informing health policy and enhancing technical and managerial capacity. Its foundation is grounded on the need for research excellence in health economics and related health system issues in developing world. HEU has been conducting a number of economic analysis alongside other public health studies at Zambart. Zambart has been conducting health economics related research since late 1990.

The HEU endeavours to develop a reputation for high quality research in health economics, health policy and systems research. Currently, we conduct research in the following areas:

- Economic evaluation of key public health priorities including HIV prevention and treatment and TB programmes.
- Health care financing.
- Scaling-up access to priority interventions.
- Application of behaviour economics in healthcare evaluation.

This report outlines key research activities which were undertaken by the unit during 2020 calender year.

2020 Health economics Research highlights

Economic analysis of Oral HIV self-testing strategies

In 2020, the Economics team concluded data analysis of the economic evaluation of Oral HIV-self testing (HIVST) distribution in the phase two of self-testing Africa Research (STAR II) project. STAR II project was an extension of STAR and was implemented in Zambia, Malawi, Zimbabwe, Lesotho, Eswatini and South Africa. The team worked in collaboration with economists from London School of Hygiene and Tropical medicine and other project countries under the leadership of Prof Fern Terris-Prestholt.

Outputs:

1. Sande A.L., Matsimela, K. Mwenge L. Mangenah C., Choko T.A., d'Elbée M., Majam M. Mostert C., Matamwandi I., Sibanda E., Johnson C., Hatzold K., Ayles A., Cowan, M.F., Corbett L.E., Neuman M., Maheswaran M., Meyer-Rath G., & Terris-Prestholt F., Costs of Integrating HIV Self-Testing in Public Health Facilities in Malawi, South Africa, Zambia and Zimbabwe; BMJ Global Health, 2021(submitted).
2. Mwenge L., Matamandi I., Mangenah C., Sande A.L., d'Elbée M., Johnson C., Simwinga M., Hatzold K., Ayles H., Cowan F., Corbett L.E., Terris-Prestholt, F., Cost Analysis of Private Sector Distribution

of Oral HIV Self-testing Kits: A case of retail outlets, private clinics, hair salons and workplace models in Zambia; BMC supplement issue, 2021 (to be submitted end of April, 2021)

Economic analysis of TREATS project

We completed data analysis of TREATS costing to calculate unit costs of facility-based TB testing and treatment. The result of the cost analysis will form the main cost input of cost-effectiveness modelling of the TREATS intervention.

Output:

The results show that TB sputum testing costs US$6.02 (US$3.45-12.94) and US$18.42 (US$10.83-33.87) using florescent microscope (FM) and gene expert (Xpert). Annual treatment cost per patient was calculated at US$108.16 (US$53.24-182.85).

Economic analysis of Yathu Yathu trial

Yathu Yathu is a community randomised trial which is designed to deliver peer-led comprehensive sexual and reproductive health (SRH) services to adolescents and young people (AYP) in Lusaka, Zambia. The trial is sponsored by London School of Hygiene and Tropical medicine (LSTM) with funding from Medical Research Council, UK. Economic analysis is still underway. In 2020 we focused on designing a case-control study in which through which we are attempting to assess the effect of incentives on AYP's health seeking behaviour for SRH service utilisation. We also started cost analysis of Yathu Yathu interventions as part of the economic evaluation process.

Outputs:

Watch this space in the forthcoming 2021 report for outputs.

Economic evaluation of Community Antiretroviral treatment (ART) study (ComART)

The Community ART study was an ancillary study to the main HPTN 071 (PopART) study that compared different models of ART delivery amongst stable HIV+ patients in two urban settings in Zambia.

In the year under review we performed a cost analysis of two community ART delivery models relative to a facility-based model from provider and patient perspective.

Outputs:

Preliminary costing results show that community ART delivery models are cheaper than facility-based delivery models (see the table below).

ART Delivery Model	ART Delivery Model Annual Cost per ART client (US$)
Facility-based (Standard of care)	130.96 (123.09-139.02)
Community delivery	126.57 (118.83-134.08)
Adherence clubs	126.46 (118.74-134.56
Home-based delivery	126.69 (119.57-133.80)

Publication highlights for HEUZ for the period 2020

There were no peer reviewed publication during 2020 but watch this space in the forthcoming 2021 report.

Highlights of Upcoming research activities

In 2021, the economics team will continue with economic analysis of the Yathu Yathu trial. The team has also participated in a number of research grant applications.

Research Team

Currently there are 3 member of staff in the unit; Health Economist, Graduate Economist and Health Economics Research Assistant.

Lawrence Mwenge (BSc, MSc, PhD candidate): Lawrence is a Health Economist and Head of Unit. He has over 12 years' experience in the economics of TB and HIV. He joined Zambart in 2006 as a Health Economics Research Assistant (HERA). Lawrence's major areas of interest are health care financing, economic evaluation, application of behavioural and health policy analysis. Specialties: Economic evaluation; behavioural economics; HIV; TB; impact evaluations and resource allocation in low-income settings. Lawrence is responsible for overseeing all Economics research work in the unit.

Lawrence Mwenge
Health Economist

Lawrence Mwenge (BSc, MSc, PhD candidate): Lawrence is a Health Economist and Head of Unit. He has over 12 years' experience in the economics of TB and HIV. He joined Zambart in 2006 as a Health Economics Research Assistant (HERA). Lawrence's major areas of interest are health care financing, economic evaluation, application of behavioural and health policy analysis. Specialties: Economic evaluation; behavioural economics; HIV; TB; impact evaluations and resource allocation in low-income settings. Lawrence is responsible for overseeing all Economics research work in the unit.

Chapter Two:
Our people

Introduction

Gilbert Jikubi,
Human Resources Manager

2020, The Year Of Resilience

The year started out as any year for Zambart employees, full of hope, new goals and initiatives. In March, the emergence of a pandemic caught all of us by surprise. In Human Resources, we were navigating the new measures pronounced by Governments across the globe and the need for Zambart to put in place new policies and measures. We implemented the new Telecommuting strategy which allowed for many of our employees to work safely from home. We increased communication with staff to include everything from how to ensure an ergonomic workstation at home to employee assistance resources during this tumultuous time.

To be resilient is the ability to recover quickly from difficulties and that is exactly the word that comes to mind to describe Zambart employees. More than 60% of staff being fieldworkers, the effects on the research activities was enormous because field activities had to be suspended from April to August 2020. Employees were facing a myriad of issues including worries about their own health, navigating a new normal of either telecommuting or working while social distancing, financial concerns, changes in family routines and general uncertainty about the future. Zambart employees continued to show perseverance and dedication every day providing exceptional services to the clients. Human Resources is very proud to support such talented, dedicated and hard-working employees.

The coronavirus pandemic has disrupted organizations and caused human resources managers to think differently about their role as they adjust to social distancing practices and a new work environment that they may never have imagined.

The New Normal: Remote Working

The concept of remote working has come a long way for some members of staff at Zambart. Prior to the COVID pandemic remote working was not routinely practiced and only occurred under exceptional circumstances. However many things have changed since the beginning of the Covid-19 pandemic.

The initial transition required some getting used to. Introducing video conferencing, new tools and the right strategies proved to be a challenge and Zambart management recognised that laying down a solid foundation was essential to a successful long-term telecommuting routine.

COVID-19 Policies and Safety Protocol

In March, Zambart initiated its first Covid-19 paid leave policy for employees who, by nature of their job, were unable to work remotely, such field staff. Some of the measures that were put in place to curb the spread of the pandemic at the office was to limit the number of people in an office or confined space in order to maintain the recommended social distancing, provision of foot-operated hand washing facilities, make mask-wearing mandatory in the office, and promote the use of hand sanitizers and regular cleaning.

Telecommuting Policy and Support Resources

Traditionally, Zambart did practice telecommuting on a regular basis. The pandemic has forced us to think creatively about meeting community activities and clientele needs and keeping employees safe. After the successful experience with telecommuting the Zambart Telecommuting strategy and the Telecommuting Policy and Procedure is being developed. This policy will allow for telecommuting even after COVID-19 has been controlled. The policy will enable departmental heads to approve telework schedules as long as it does not unduly disrupt operations, there is work that can be done at home, and there is always coverage for every department during business hours.

In addition to the policy, Human Resources Department created the Telecommuting system that accounts for who is working from home and when, what equipment they have, etc. Human Resources also shared information on how to set up a workstation at home ergonomically in order to avoid any workplace injuries when working remotely. Human Resources will be continue to enhance this strategy as more and more staff return to work but may desire to continue a more part-time telework schedule. Zambart also empowered managers with the autonomy to work with direct reports to create schedules that best accompanied their work-from-home lives.

"What has changed the most for HR professionals and the role that they will play moving forward is that, in our world, the focus tended to be on pay. Now I believe health and wellness benefits are going to be a game changer," -Claudine Naughton

Recruitment, Selection and Hiring

Each time an opening exists, a request is created to fill the position. Each request is unique to the position and initiates a discussion with the hiring manager and Human Resources department regarding a recruitment timeline, advertisement sources, minimum qualifications, and selection of the interviewing panel.

The newspapers continue to be our best recruitment source. Our second most popular method of hearing of our openings is the www.gozambiajobs.com website. Word of mouth also continues to be a good advertisement source especially for former employees we need to rehire.

In 2020, most of the interviews were set up to be completed virtually to keep everyone safe. Coordination of interviews involves setting up interview dates, sending out correspondence to candidates, reviewing proposed interview questions, and setting up second interviews if needed.

We hired a total of 173 individuals in 2020 across all departments and studies mostly on TREATS Prevalence, TREATS Covid and TREATS Incidence.

165 employees separated during 2020. With an average of 207 staff, this resulted in a 79.7% turnover rate for the year mostly due to the study/ project coming to an end with TREATS Prevalence survey having the largest number of joiners and leavers.

Capacity Building

Zambart has a long history of providing professional development. These are both internal and external

Internal

Zambart provides training opportunities including GCP science writing courses public health research.

External

The organisation provides financial and mentorship support to staff who want to pursue tertiary education and or upgrade their qualifications.

In 2020, we had five members of staff pursuing their PhD's and two Master' students at various universities at different levels of completion.

2021 Looking Ahead

In 2021, Human Resources will be focusing efforts on the following three big projects:

- Complete and Implement the 360 degree Performance Policy.
- Develop the Zambart Security Protocol;
- Migration to electronic personnel files (paperless files).

As we continue to be in the midst of this pandemic, I'd like to leave you with this quote by Charles R. Swindoll, "Life is 10 percent what happens to you and 90 percent how you react to it."


TREATS
TEST.
TREAT.
TB FREE.
Services include:
• TB Screening & Testing
• HIV testing
• Chest X-ray
• Linkage to care through local health facilities
KNCV

Chapter Three:
Our communications

Our Stakeholders

We work with Zambian Government primarily through the Ministry of Health and its associated agencies with whom we maintain a very strong relationship in public health research, data and information dissemination.

Our work with the Ministry is usually guided by a memorandum of understanding where capacity building is of the outmost importance. The ministry provides an enabling environment for us to conduct our studies in areas where collaboration with health facilities are needed. We disseminate results from our studies to the Ministry and agencies in advance of public release.

Zambart also has close working relationships at local, provincial and national level with other stakeholders in public health research including researchers, academicians, non-governmental organisations, community based organisations, community advisory boards and numerous other local institutions. These collaborations are critical to developing and reporting nationally consistent and comparable health data.

Stakeholder Engagement

Reaching our audiences

We continued to make our work available and easy to understand through increased use of short reports. All print-ready publications are available free of charge on our website as PDF documents. Users are invited to contact us if they need information from the website presented in an alternative format for accessibility reasons.

Media Coverage

Due to COVID-19, media focus on COVID-19 from the second quarter led to an overall decline in

media coverage during 2020. We issued 1 media release in 2020 and Zambart had 26 media mentions throughout the year. This indicated a decline in print, radio and television coverage from the previous year. The report that attracted the most media coverage during the year was the TREATS COVID-19 study launch announcement in August 2020

Social Media

Twitter and Facebook

Twitter and Facebook (@ZambartResearch) continues to be our primary social media platforms for communicating with our stakeholders. We are working on increasing ''impressions' to our pages by improving content on the pages

Multimedia

In 2020, we built on our social media presence through a more consistent new social media strategy. We continued to use Facebook and Twitter for targeted communication, but also increased content and engagement to better reflect current social media trends and enhance our engagement with stakeholders.

We will continue developing this strategy for standard study releases in 2021

Guest speakers

Our research directorate virtual speaker series aims to bring in external and internal speakers to talk to staff about interesting and relevant research topics. In 2020, 18 experts spoke about a range of topics. These events were held virtually every Friday morning throughout the year to ensure staff safety amid the COVID-19 pandemic

Our website

Our website at www.zambart.org.zm is our main channel for Zambart information, including our studies, press releases and corporate information.

Chapter Four:

Financial Overview

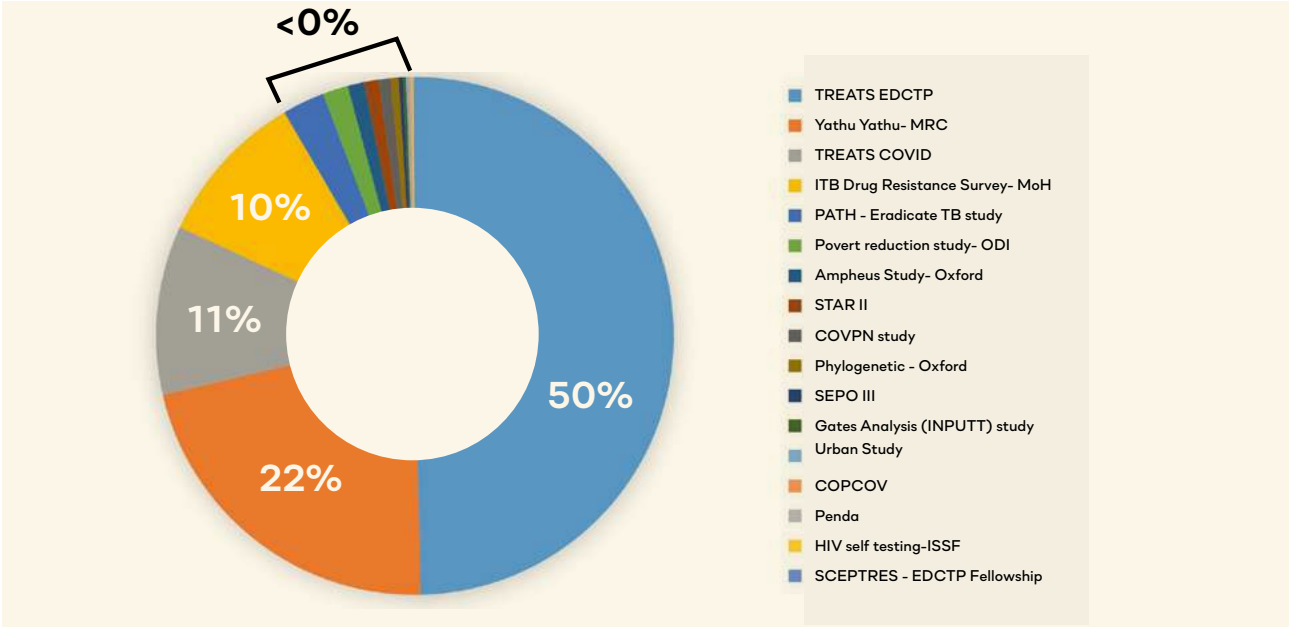
Income

In 2020 our total income was ZMW 68.2m of which ZMW 65.9m was Research grants and ZMW 2.3m was from other sources.

The top four studies namely TREATS EDCTP, Yathu Yathu, TREATS COVID and the Drug Resistance survey accounted for 92 percent of the total research grant income for the year.

The figure below shows the income distribution per study:

2020 Grant Income by study



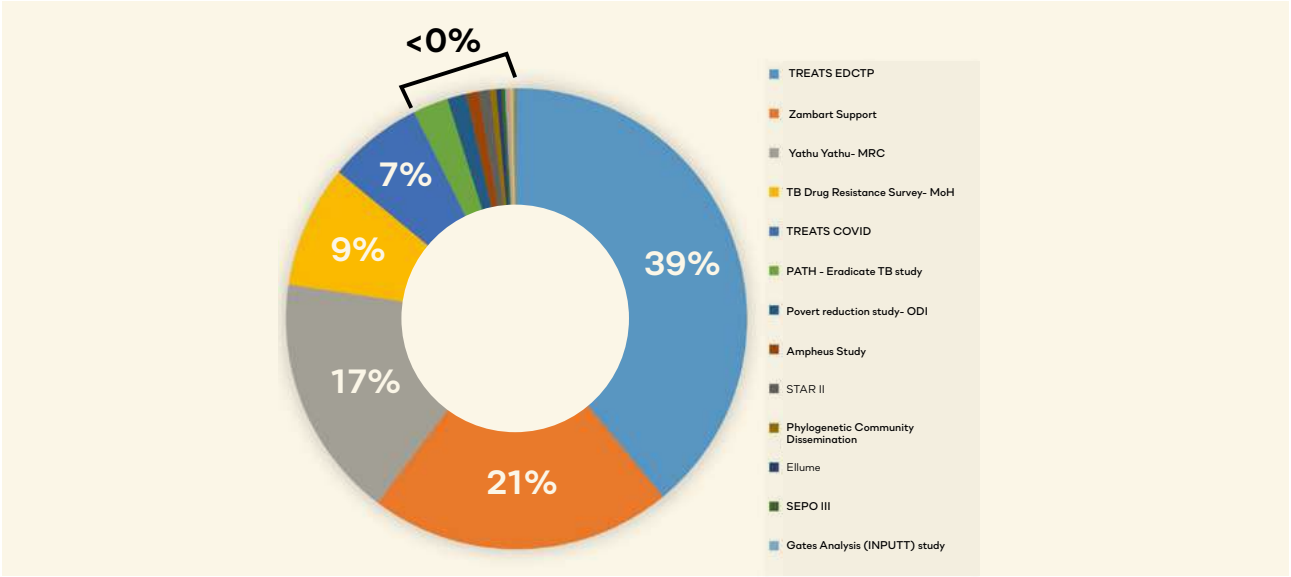
Expenditure

In the same year, our total expenditure was ZMW 66.3m of which ZMW 52.2 was spent on delivering our research activities and ZMW 14.1m was spent on support and governance.

The top four spending studies namely TREATS EDCTP, Yathu Yathu, TREATS COVID and the Drug Resistance survey accounted for 71 percent of the total expenditure while Zambart Support costs account for 21 percent.

Below is the expenditure distribution from each study

Expenditure by Study



Our fundraising initiatives saw a number of new studies coming along in 2020 including the COPCOV, ISSF adolescents HIV self-testing, Urban infrastructure (RINSS), FGS, TREATS COVID (understanding the Epidemiology of SARS-CoV-2 and the inter-relation of COVID-19 with TB and HIV in Zambia) and SCEPTRES.

Organisational Development and financial assurance

The development of an automated procurement processing system advanced during the year under review. The new system was successfully tested and piloted by the end of 2020 and full migration to this new system is planned for the

first quarter of 2021.

As part of our vision to go paperless, we moved to the second phase of our automation drive to automate the voucher management and processing system. We plan to test and pilot the new system during 2021 financial year.

Audit and Assurance

The internal audit department continued to provide value addition audits to processes and systems at Zambart supporting risk management and governance.

The closeout yellow book audit of the PopART Study for the NIH/NIAD funding stream was conducted during the period under review. The PopART Gates funding stream also underwent an end of project audit. Both audits gave us a clean bill of health and the project has since closed.

We also underwent the annual statutory audit for 2019 that gave us a positive opinion by the independent auditors. Appendix 1 is an extract of the 2020 audited financial statements.

Active studies during 2020

Study Title	Funding Institution
Funding Institution	National Institute of Health, USA/LSHTM
	BMG Foundation via 3ie /LSHTM
HPTN 071 Sub study: HIV-related stigma and discrimination among health workers in sub-Saharan Africa in the context of universal combination HIV prevention and treatment:	National Institute of Health, USA/ LSHTM
HPTN 071 Sub study: Phylogenetics in PopART	National Institute of Health, USA / LSHTM
Eradicate TB study	PATH Zambia
TB Drug Resistance Survey	Ministry of Health, Zambia

Continued

Study Title	Funding Institution
Telisinghe study: Can community-wide active case finding for tuberculosis and universal testing and treatment for HIV control the African tuberculosis epidemic?	LSHTM
Poverty dynamics study	Overseas Development Institute (ODI)
QFT Access usability study	QIAGEN GmbH
Programme to Evaluate and Inform Disability Action (PEN-DA)	LSHTM (DfID)
SEPO III - Advancing Chronic Disease Models of Care for People Living with HIV in Resource-Poor Settings	University of Toronto
Tuberculosis Reduction through Expanded Anti-retroviral Treatment and Screening for active TB (TREATS) study	EDCTP II via LSHTM
HIV Self-Testing Africa Region (STAR II)	Population Services International via LSHTM
Yathu Yathu - A Cluster Randomised Trial of community-based SRH and HIV services for adolescents and young people in Zambia	Medical Research Council (UK) via LSHTM
HIV self-testing among young people	ISSF
Urban Infrastructures of well-being program - RINSS	The British Academy
TREATSCOVID - Understanding the Epidemiology of SARS-Cov-2 and the inter-relation of COVID-19 with TB and HIV in Zambia	EDCTP II
SCEPTRES - Supporting Community Engagement to Promote Tuberculosis Research Ethics and Science	EDCTP II
GATES INPUTT Analysis	BMG Foundation via LSHTM
AMPHES - Analytics and Microbiology for Precision Health; a Unified System	BMG Foundation via Oxford University

Appendix 1 – Full Financial Statement

Zambart

(A Company Limited By Guarantee)

Financial statements for the year ended 31 December 2020

Statement of financial position

Figures in Zambian Kwacha	2020	Restarted 2019	Restarted 2018
Assets			
Non - current assets			
Property, plant and equipment	**4,380,147**	**4,907,142**	**2,423,207**
Current assets			
Other receivables	13,995,987	7,256,742	6,031,180
Cash and bank balances	26,017,454	16,672,815	33,933,950
	40,013,441	23,926,557	39,965,130
Total assets	**44,393,588**	**28,836,699**	**42,388,337**
Equity and Liabilities			
Accumulated fund	16,267,095	12,955,409	11,310,435
Capital grant	3,424,905	2,976,585	3,190,497
Revaluation reserves	2,297,511	3,272,824	558,040
	21,989,511	19,204,818	15,058,972
Current liabilities			
Other payables	22,404,077	9,631,881	27,329,365
Total equity and liabilities	**44,393,588**	**28,836,699**	**42,388,337**

Zambart

(A Company Limited By Guarantee)

Financial statements for the year ended 31st December 2020

Statement of comprehensive income

Figures in Zambian Kwacha	2020	Restarted 2019
Income		
Grant income	61,889,132	59,506,580
Foreign exchange gains	4,020,961	3,649,183
Other income	2,278,286	255,861
	68,188,379	63,411,624
Total income	**68,188,379**	**63,411,624**
Expenditure		
Operating expenses	66,311,264	62,778,546
Surplus / (deficit) for the year	**1,877,115**	**633,078**
Current liabilities		
Other payables	9,631,881	27,329,365
	28,836,699	**42,388,337**

Statement of changes in equity

Figures in Zambian Kwacha	Capital grant	Revaluation reserve	Accumulated fund	Total equity
Balance at 31 December 2017	**5,277,892**	**1,413,202**	**21,106,595**	**27,797,689**
Deficit for the year	-	-	(16,367,603)	(16,367,603)
Amortisation of revaluation of reserves	-	(437,895)	437,895	-
Received during the year	552,746	-	-	552,746
Amortisation of capital grants	(1,893,025)	-	1,893,025	-
Balance at 1 January 2018 as restated	**3,937,613**	**975,307**	**7,069,912**	**11,982,832**
Surplus for the year	-	-	2,463,741	2,463,741
Amortisation of revaluation of reserves	-	(417,267)	417,267	-
Received during the year	612,399	-	-	612,399
Amortisation of capital grants	(1,359,515)	-	1,359,515	-
Balance at 1 January 2019 as restated	**3,190,497**	**558,040**	**11,310,435**	**15,058,972**
Profit for the year	-	-	633,078	633,078
Revalation surplus	-	3,148,665	-	3,148,665
Received during the year	364,103	-	-	364,103
Amortisation of capital grants	(578,015)	-	578,015	-
Amortisation of revaluation of reserve	-	(433,881)	433,881	-
Balance at 1 January 2020 as restated	**2,976,585**	**3,272,824**	**12,955,409**	**19,204,818**
Profit for the year	-	-	1,877,115	1,877,115
Revaluation of disposed assests	-	(72,050)	-	(72,050)
Received during the year	979,628	-	-	979,628
Amortisation of capital grants	(531,308)	-	531,308	-
Amortisation of revaluation of reserve	-	(903,263)	903,263	-
Balance at 31 December 2020	**3,424,905**	**2,297,511**	**16,267,095**	**21,989,511**

Statement of cash flows

Figures in Zambian Kwacha	2020	Restarted 2019
Cash flows from operating activities		
Cash generated from (used in) operations	9,272,587	(17,266,545)
Cash flows from investing activities		
Purchase of property, plant and equipment	(979,628)	(364,103)
Loss on disposed assets	72,052	5,410
Net cash used in investing activities	(907,576)	(358,693)
Cash flows from financing activities		
Capital grants received	979,628	364,103
Net cash used infinancing activities	979,628	364,103
Total cash movement for the year	**9,344,639**	**(17,261,135)**
Cash at the beginning of the year	16,672,815	33,933,950
Total cash at the end of the year	26,017,454	16,672,815

Note:

Restatement of accrued income, deferred income, and accumulated funds

During the year, the directors resolved to change the accounting policy for grant income. Under the old policy, funds from donors were recognised as grant income in the year of receipt. Grant income is now recognised when the related expenses have been incurred.

Consequently, this change in accounting policy resulted in the recognition of deferred income for funds not utilised, and accrued income for expenses incurred in advance on the statement of financial position.

This change in the grant income accounting policy constitutes a change in accounting policy in accordance with International Accounting Standard (IAS) 8 - Accounting policies, Changes in Accounting Estimates and Errors. Consequently, the effects of this change in accounting policy will be accounted for retrospectively.

The retrospective application of the change in the grant income accounting policy required the directors to adjust the opening balance of each affected component of equity for the earliest prior period presented and other comparative amounts disclosed for each prior period presented as if the new accounting policy had always been applied.

Hence, the effects of the change in the accounting policy were accounted for in the period beginning 1 January 2018, being the latest prior period for which retrospective application is practical.

Thank You

Aeras/GSK

Berth Israel Deaconess Medical Centre

Bill & Melinda Gates Foundation

The British Academy

Delft Imaging Systems, Netherlands

Desmond Tutu TB Centre- Stellenbosch University

Department for International Development

European and Developing Countries Clinical Trials Project II

Family Health International 360 (FHI360)

Imperial College

International Initiative for Impact Evaluation (3IE)

London School of Hygiene and Tropical Medicines (LSHTM)

Medical Research Council- UK

Ministry of Health, Zambia

National Institute of Health, USA

Overseas Development Institute

PATH Zambia

Population Council, Zambia

Population Services International/UNIT AID

QIAGEN GmbH

SHM Foundation

The University of Toronto

The University of Zambia, School of Public Health

The University Teaching Hospital, Lusaka

The International AIDS Vaccine Initiative

The University of Oxford

Zambart Strategic Vision 2019-2025

Strategy 2019-2025 Vision

To be internationally recognized as Africa's leading public health research and training organization

Mission

1. To conduct high quality health research
2. To train world class health researchers

Values

Zambart's key values are Excellence, Quality and Compassion.

Strategy

The Zambart research directorate strategy is made of 7 key strategic priorities:

1. **High Quality Health Research:** Expand beyond HIV& TB into other areas of health research
2. **Strong Strategic Partnerships:** Strengthening existing partnerships and developing new ones
3. **Great Global Reputation:** being visible and well known locally, regionally and globally
4. **Demonstrable Policy Impact and Influence:** Locally and internationally
5. Financial Sustainability
6. **Robust Training and Consultancy Warm:** a self-sustaining business providing services to others
7. **Great place to Work:** inspired people working in a great environment

Strategic Priorities and Targets

1. High Quality Health Research: Expand beyond HIV& TB into other areas of health research

Zambart has traditionally been known for research in the field of TB and HIV and this is where we have all of our expertise. The focus on this area of work will remain and it is anticipated that ongoing and new studies will continue this work. However, there is also a strong desire to move into other areas of research and this will necessitate developing new relationships with individuals and institutions who have the necessary expertise.

Key Performance targets 2020:

1. To have won at least 2 new major research grants in the field of TB/HIV by 2020
2. To have successfully first authored at

least 10 papers from the HPTN 071 PopART trial, and 10 papers from the other research studies that are ongoing

3. To have made at least one new linkage with an area of public health beyond TB/HIV

Key performance targets 2025:

1. To have at least 3 grants in research areas that are beyond TB/HIV
2. To have attracted one senior researcher in an area not related to TB or HIV

2. Strong Strategic Partnerships: Strengthening existing partnerships and developing new ones

Zambart developed out of a strong partnership between the London School of Hygiene and Tropical Medicine and the University of Zambia, School of Medicine. The strong partnership between the two institutions has continued and has developed as the University of Zambia, School of Public health has been developed and as significant changes in funding and structure have occurred at LSHTM.

Zambart has also enjoyed strong partnerships with other institutions including Stellenbosch University, Imperial College, HPTN and Johns Hopkins University. Over the past two years Zambart has developed new partnerships with KNCV, Qiagen, Sheffield University and the Union and these need to be nurtured and expanded.

In order to continue to function nationally and internationally Zambart needs to strengthen and expand these relationships.

Key Performance targets 2020:

1. To have a meaningful partnership with the University of Zambia, School of Public Health, evidenced by a functional MoU, joint appointments for at least 3 staff members, joint post-graduate and masters students.
2. To have developed a renewed relationship with LSHTM evidenced by visits from senior LSHTM faculty, increased student placements, ongoing postgraduate students
3. To partner in at least one new grant with a recently formed partnership.

Key Performance Targets 2025:

1. To have at least two new strategic partnerships with institutions nationally and internationally
2. To have a new relationship with LSHTM such that Zambart is recognized at the top of the list of strategic partners

3. Great Global Reputation: Being visible and well known locally, regionally and globally

Zambart is well known in some fields but entirely unknown in others. Going forwards Zambart should be a nationally and internationally recognizable brand that symbolizes quality research.

Reputation in the field of research develops from academic engagement with publications, conference presentations and also broader media engagement.

Key Performance targets 2020:

1. A new recognizable brand which represents the key research strategies
2. At least 10 papers in high impact journals with Zambart authors first or last
3. At least 5 media mentions and 1 specific media article

Key Performance targets 2025:

1. At least 2 invited plenary talks at international conferences
2. The majority of papers are first or last authored by Zambart staff
3. Zambart research conference?

4. Demonstrable Policy Impact and Influence: Locally and internationally

For our research to have meaning we need it to be adopted into health policy locally and internationally. This is achieved by networking with key policy makers and policy making institutions such as Ministry of Health, WHO, UNAIDS, PEPFAR etc.

Engagement and networking with stakeholders locally and internationally requires Zambart to have representation on key committees and technical working groups and to contribute to guidelines development groups

Key Performance targets 2020:

1. Zambart visible and proactive member on at least 3 national technical working groups
2. Zambart staff invited to participate in at least one international guidelines working group
3. At least 3 requests for assistance with policy or guidelines

Key Performance targets 2025:

1. More than 3 different Zambart staff members invited to attend WHO guidelines or policy groups
2. Stakeholder engagement is a key part of our activities in all programmes

5. Financial Sustainability

As a research organization Zambart needs to sustain itself financially via research grants. A constant income is challenging but needs to be maintained to ensure consistency in the administration of Zambart and to allow security and career progression for staff. This is best provided via a diverse portfolio of grant holders and funders, so that funding is not reliant on one individual or donor.

Key Performance targets 2020:

1. Robust grant writing pipe line in operation
2. At least 10 grant proposals submitted by at least 4 different individuals, to at least 3 different funders
3. At least two successful new grant applications

Key Performance targets 2025:

1. A strategically balanced and inclusive grant portfolio with no funding gaps for the previous 3 years
2. At least one additional member of staff submitting a grant proposal annually, so that the pool of grant writers is now more than 8

6. Robust Training and Consultancy arm: A self-sustaining business providing services to others

Recognising the limitations of purely grant funding, and acknowledging the potential value of some consultancies, Zambart would like to form a "for profit" company which would allow it to provide training courses on specific topics as well as to act in a consultancy capacity. This may include laboratory work, epidemiological surveys or qualitative work.

This "Zambart Ltd" would function alongside the research arm without detracting from it in terms of person time and would provide additional security for individuals if grant funding is limited. The company would not only build on Zambart's reputation but also enhance Zambart's reputation with stakeholders.

Key Performance targets 2020:

1. "Zambart Ltd established as a for profit entity, with all corresponding articles and policies
2. At least one consultancy bid completed

Key performance targets 2025:

1. "Zambart Ltd" fully functional and contributing towards common funding of Zambart

2. At least 2 training courses offered with demand from, and attended by, international students

3. At least 3 consultancies completed

7. Great place to Work: Inspired people working in a great environment

Zambart needs a committed, focused and inspired team working together to achieve its goals. Zambart has its own facilities but these need to grow and adapt to meet the needs of the organization.

Key Performance targets 2020:

1. A healthy pipeline of staff progressing through career development, in all fields, supported and funded by a capacity development team.

2. Updated facilities including a fresh look for Zambart house, improved maintenance and environment as well as state of the art video conferencing facilities.

Key Performance targets 2025:

Excellence, quality and compassion

Key elements underpinning all of the strategic priorities of the research directorate are excellence, quality and compassion. Zambart aims to conduct all of its activities to the highest standards of research and ethics. The motivation for all that Zambart does is to improve the health of the people of Zambia and the rest of the world.

Research Governance

To ensure the highest possible standards in research Zambart will build a research governance department that is world leading. This department will provide guidance and leadership in all aspects of research governance and training and will monitor all research activities to ensure the highest possible standards.

All staff members will receive annual research ethics training and all studies will contribute towards the ongoing development of the research governance department. By 2025 Zambart will have its own ethics committee and will also provide research monitoring and support to other institutions planning research in the region.

Giving back to our communities

The communities in which we work are key partners in everything we do. Zambart will develop relationships with our research communities that represent true partnerships. Zambart will be a world leader in community engagement and will act as an inspirational model for others in the field.


EATS

Zambart

Research and Development to Improve Health for All