



2022 Annual Report

Care for the
Hospitalized Patient



30,167
patients triaged

Global Health
Security



5,353,551
people reached

Health Systems
Strengthening



10,702,278
people reached

Tuberculosis Diagnostics
and Treatment



10
publications

Acronyms

AEFI	Adverse Events Following Immunization
AFP	Acute Flaccid Paralysis
ARCS	Africa Research Collaboration on Sepsis
BCG	Bacillus Calmette- Guérin
bOPV	Bivalent Oral Polio Vaccine
CBDS	Community-Based Disease Surveillance
CCHF	Crimean Congo Haemorrhagic Fever
CDC	Centres for Disease Control and Prevention
DHO	District Health Officer
DIFP	District Immunization Focal Person
DPT-	Diphtheria Pertussis Tetanus
DSFP	District Surveillance Focal Person
DVS	District Vaccine Store
EMR	Electronic Medical Record
EPI	Expanded Program on Immunization
EVD	Ebola Virus Disease
GPEI	Global Polio Eradication Initiative
HICH	Holy Innocent's Children's Hospital
HMIS	Health Management Information System
HSDSFP	Health Sub District Surveillance Focal Person
IPV	Inactivated Polio Vaccine
iStreams	Innovations Streams
MoH	Ministry of Health
NNT	Neonatal Tetanus
NPAFP	Non-Polio Acute Flaccid Paralysis
NPENT	Non-Polio Enterovirus
OPV	Oral Polio Vaccine
PCV	Pneumococcal Conjugate Vaccine
PFNP	Private for non-profit
PFP	Private for profit
PoE	Point of Entry
REC	Reach Every Child
RED	Reach Every District
SMS	Short Message Service
SOP	Standard Operating Procedure
STOP	Stop Transmission of Polio
TB	Tuberculosis
UBC	University of British Columbia (UBC)
UCMB	Uganda Catholic Medical Bureau
UCSF	University of California San Francisco (UCSF)
UNEPI	Uganda National Expanded Program on Immunization
UPMB	Uganda Protestant Medical Bureau
UTIRC	Uganda Tuberculosis Implementation Research Consortium
UVRI	Uganda Virus Research Institute
VHT	Village Health Team
WALIMU	World Alliance for Lung and Intensive Care Medicine in Uganda
WHO	World Health Organization



Cover Picture concept
A collage of some of WALIMU
Programme activities

Contents

1. 2022 At-A-Glance	2
2. Letter from Executive director	3
3. Overview	4
4. 2022 Performance Scorecard	5
4.1. Strengthening Disease Surveillance And Epidemic Control	5
i. Surge Capacity for Epidemiological Surveillance in the National Response to EVD Epidemic in Uganda.....	6
ii. Strengthening Surveillance systems for Polio	8
4.2 Care For The Hospitalised Patient	11
i. Digital approaches to reducing time to treatment: The Smart Triage	11
ii. Improving the transition from the health facility to community care; Smart Discharges	14
4.3 Implementation Research For Tuberculosis	15
i. Implementation Science to accelerate appropriate and timely diagnosis and treatment for Tuberculosis Diagnostics	15
5. Internal Capability To Serve And Sustainability	19
6. 2022 Financials	22
6.1 Income Analysis Across Walimu Thematic Areas.....	22
6.2 Audited Financial Statements 2022	23
Funding	24
Publications and conference presentations	25

2. 2022 at a glance



Beneficiaries reached
16,284,069 (10,702,278 children under 5)



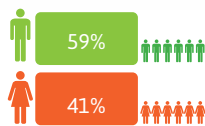
Patients touched,
227,640 (30,167 children)



Health workers trained
668



Households visited
1,604,221



Staff
165



Publications and conference presentations
30



Message from our Executive Director

We thank God for yet another prosperous year at WALIMU. 2022 has seen WALIMU continue to soar, serving 16,284,069 beneficiaries, the highest in a single year, across all the 145 districts and cities in Uganda. The grant portfolio maintained a steady increase of 56% up from 2021, with 21% of the funding locally sourced from in country partners. We have further expanded our knowledge translation initiatives, doubling our publications and conference presentations and abstracts. We have also been able to commence multi-country partnerships after winning two big grants for which WALIMU shall be a hub for 13 countries in research in sepsis (seven countries) and tuberculosis (six countries) respectively.

These achievements are attributable to deliberate efforts to make WALIMU competitive coupled by formidable human capital. In 2022, WALIMU invested significantly in development of human capital, particularly capacity building efforts to develop and sustain core competencies necessary for implementing core processes for attracting and managing grants and research in line with international best practice.



Dr. Nathan Kenya-Mugisha, MBChB, MMed, MPH
Executive Director

This has resulted in increased trust among funders and our key partner, the Ministry of Health. The Ministry of Health has initiated several new partnerships with Walimu across an array of health areas.

In the upcoming year, WALIMU will be marking 10 years on, August 23rd 2023. In the same year, WALIMU will be implementing activities across 13 countries through the new international partnerships. This comes with a new set of challenges, but also fresh opportunities for Walimu to grow its impact.

I extend my appreciation to the 165 staff who have made it happen, our formidable team on the Board of Directors for guiding our work, our partners and funders for the support and above all our 16 million beneficiaries who have made our journey worthwhile as we kickstart our 10th year in 2023.

3. Overview

Vision

To reduce mortality amongst severely ill patients in Ugandan health facilities.

Mission

WALIMU works to empower health workers to address local health problems in innovative ways in order to transform patient care and improve outcomes.

Core Values

- i. **Evidence** as the core of our work
- ii. **Excellency** in all we do
- iii. **Innovation** in addressing local health problems
- iv. **Integrity** in our dealings
- v. **Partnership** for greater reach and impact

Our philosophy

- i. **Impact:** Research should not just end in a publication. Our research provides evidence of what works to policy makers and others. We deliver at high fidelity and efficiency. We make sure our research is relevant to routine care and improves patient outcomes.
- ii. **Policy:** Effective policy translation requires a collaborative approach. Relevant stakeholders such as the Ministry of Health, subject matter experts and the affected community must be involved right from the concept of an idea through to translating research findings into policy..
- iii. **Practice:** We believe that by providing health workers with the right mix of capabilities, opportunities, and motivation, we can improve patient care in Uganda.

Our model:

We are implementing the Health worker first model. Health care providers must be engaged and empowered to achieve lasting results. Our program builds cultures of excellence at hospitals by enabling collaboration, transparency and accountability.

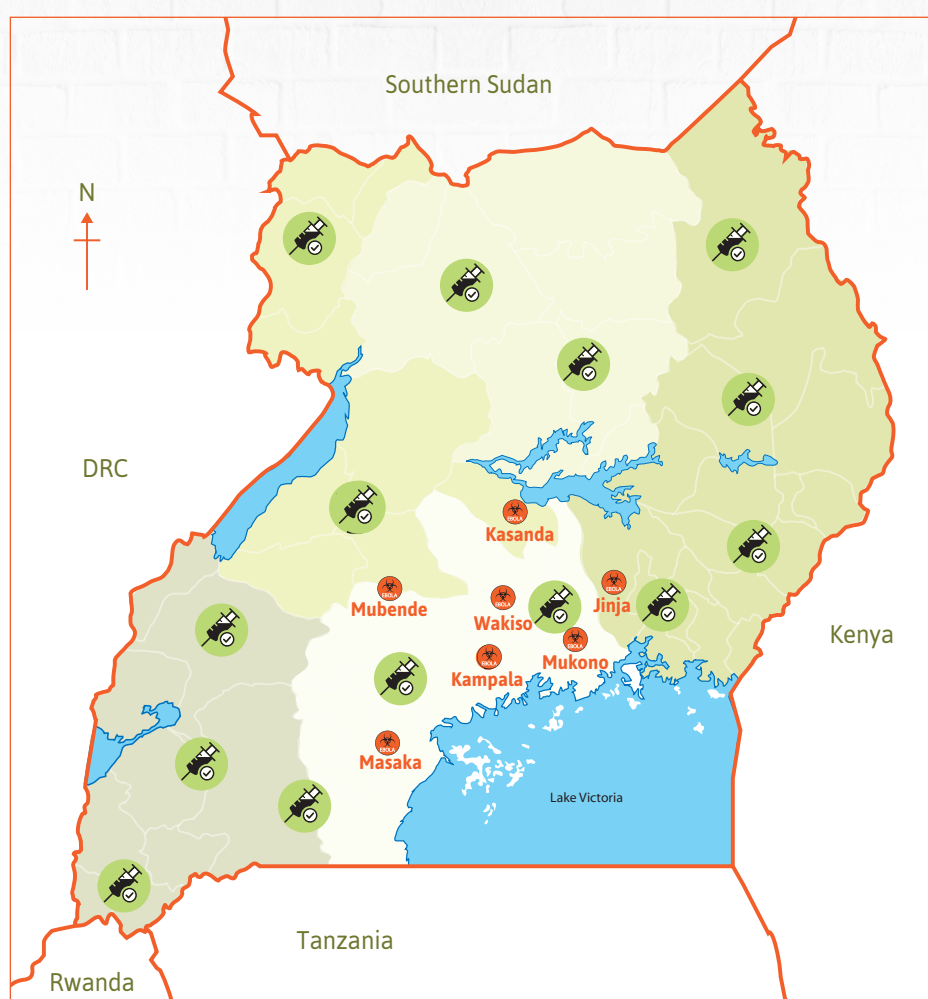
WALIMU is currently implementing its programs in four thematic areas;

- i. Care for the Hospitalized Patient
- ii. Global Health Security
- iii. Health Systems Strengthening
- iv. Tuberculosis Care and Prevention

4. 2022 Performance Scorecard

4.1 Strengthening Disease Surveillance And Epidemic Control

Thematic Area	Strategic Priority	Achievement
Strengthening Disease Surveillance and Epidemic Control	Health worker training	68 Health workers trained and support as part of surge teams for the Ebola Virus Disease Response and Surveillance for Vaccine Preventable Diseases.



National response to the Ebola epidemic
197,473 patients



Active surveillance for vaccine preventable diseases.
16,055,829 beneficiaries reached.



Epidemiologists in Greater Masaka alongside their WHO counterparts at the Masaka Emergency Operations Centre

i. Surge Capacity for Epidemiological Surveillance in the National Response to Ebola Virus Disease Epidemic in Uganda

197,473 patients reached



5,353,551 persons reached

through Community Based Disease Surveillance in Kampala, Mukono, Wakiso, Masaka, Jinja, Kassanda and Mubende



On 20th September 2022, the Ministry of Health declared an outbreak of Ebola Virus Disease in Uganda. As part of support from the World Health Organization to the Ministry of Health, WALIMU provided a surge force of 52 Epidemiologists under the Surge Capacity for Epidemiological Surveillance in the National Response to Ebola Virus Disease Epidemic in Uganda.

The purpose was to facilitate rapid detection and isolation of new cases to prevent onward transmission of the virus. WALIMU's role was to recruit, train, deploy and provide support supervision and mentoring to the team of epidemiologists in consultation with the Ministry of Health.



Epidemiologists during alert verification in Kassanda District during the Ebola Virus Disease outbreak

The contribution of the officers was mainly assessed on the four key parameters of alert management, active case search, Community-Based Disease Surveillance (CBDS) and mortality surveillance within the incident management structures. Across the various districts, the officers were able to contribute to verification of **15,505** alerts, reviewed **511,480** records in active case search and visited 1,604,221 households in Community Based Disease Surveillance.

One success story was through enhanced surveillance activities including alert management; active case search, and case investigation, Crimean Congo Haemorrhagic Fever (CCHF) virus cases were identified along and confirmed. Although, it is less virulent and transmissible compared to EVD, the case fatality rate of CCHF can be as high as 40%. Amidst heightened surveillance activities in the region, two CCHF cases were co-identified.

With the outbreak declared over on January 11, 2023, for the next half of the project, focus is going to be on kick-starting and providing post training reinforcement on Integrated Disease Surveillance and Response third edition currently under roll out to catchment districts and health facilities

ii. Strengthening Surveillance Systems for Polio



10,702,278
children reached



As part of response efforts to the confirmed polio outbreak in June 2021, WALIMU received funding from the World Health Organization to support the Ministry of Health Uganda National Expanded Program on Immunization (UNEPI) purposely to ensure that round two of the Polio SIAs is of quality and Polio and other surveillance indicators are in line with the GPEI standards. To achieve this, the teams took lead in refining the micro-plans prior submitted, development of implementation plans, facility mentoring and support supervision as well as monitoring Surveillance indicators and investigation of AFP cases and other VPDs.

A comparison of the performance of round two with round one showed that more children were vaccinated (9,567,466 versus 8,410,641 children in round one) achieving a 14% increase from round one. The number of silent districts went down from 94 in January to 0 with all districts in Uganda reporting at least one AFP suspect case, 1012 AFP cases were investigated by December as opposed to 82 in January, NPAFP rate increased to 4.2 up from 3.8 in January. Half of all districts attained a new NPENT rate of more than 4 per 100,000. The EVD affected districts of Kampala, Wakiso, Mukono, Kassanda and Mubende that implemented much later were also able to register a 114% joint performance above target (1,019,361 versus 1,134,812)

During the nOPV2 SIAs, the guidance of a team per village was not applicable to some districts who improvised through use of VHTs where there were insufficient numbers of trained health workers. Also, various districts were complacent about staggering let alone borrowing vaccine carriers. Through joint engagement and planning, majority of districts were able to implement as guided. Those who blatantly defaulted such had to do staggered mop ups. Insufficient knowledge on filling of micro plans right from the facilities and poor utilization of EPI data to improve immunization performance were highlighted as key factors impeding the achievement of the RED REC strategy. Feedback from UNEPI was that the Polio surge team's accountability to the UNEPI created independent grounds and harmonious working environments and so confounders resulting from allegiance from particular partners did not exist.

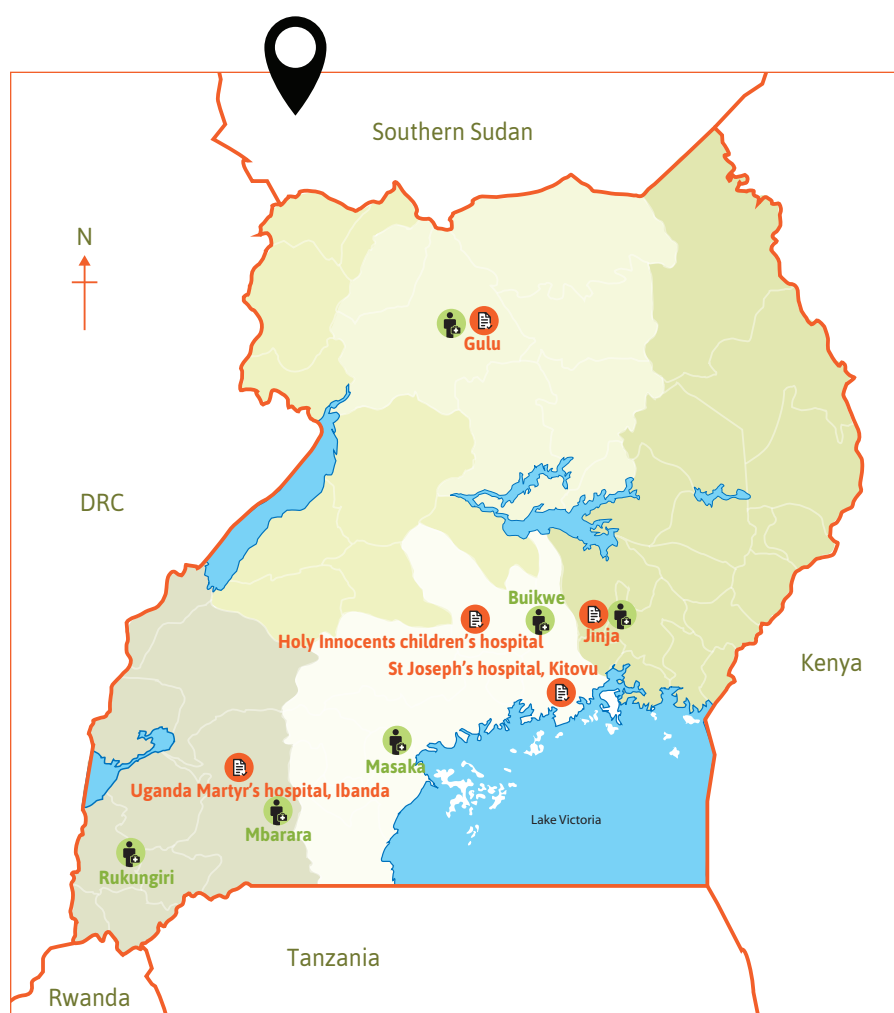


Finger marking during the Polio reactive campaign supported through the surge

For the gains made so far to be sustained, there is need to translate the IIP to health facilities, RED/REC micro plans need to be developed for all facilities and zero doses reported in the nOPV2 SIAs have to be investigated and remedial interventions taken. A tripartite performance review meeting was held by UNEPI, WALIMU and WHO to evaluate the contribution of the Surge teams. At this meeting, the various officers were able to present their level of achievement as per their terms of reference of the deployment. In their strategic feedback, on the overall, the officers had achieved the targets of their deployment. However, UNEPI and GPEI noted that while all AFP investigation targets and terms of reference had been achieved, there was need to investigate the zero doses emerging from the SIAs round two. In their conclusion, this success was mainly linked to capacity building of officers and the coordination between the EPI-SOs, the districts and the program. This approach allows for focus on EPI activities providing for a solution to competing priorities at district and regional level.

4.2 Care for the Hospitalised Patient

Thematic Area	Strategic Priority	Achievement
Care for the hospitalised patients	Innovation and Evidence Building	Four publications
	Health worker Training	600 health workers trained, 30167 children reached
	Influencing Policy and Practice	12 conference presentations



Smart Triage
600 health workers trained
30167 children reached



Smart Discharges
4 publications

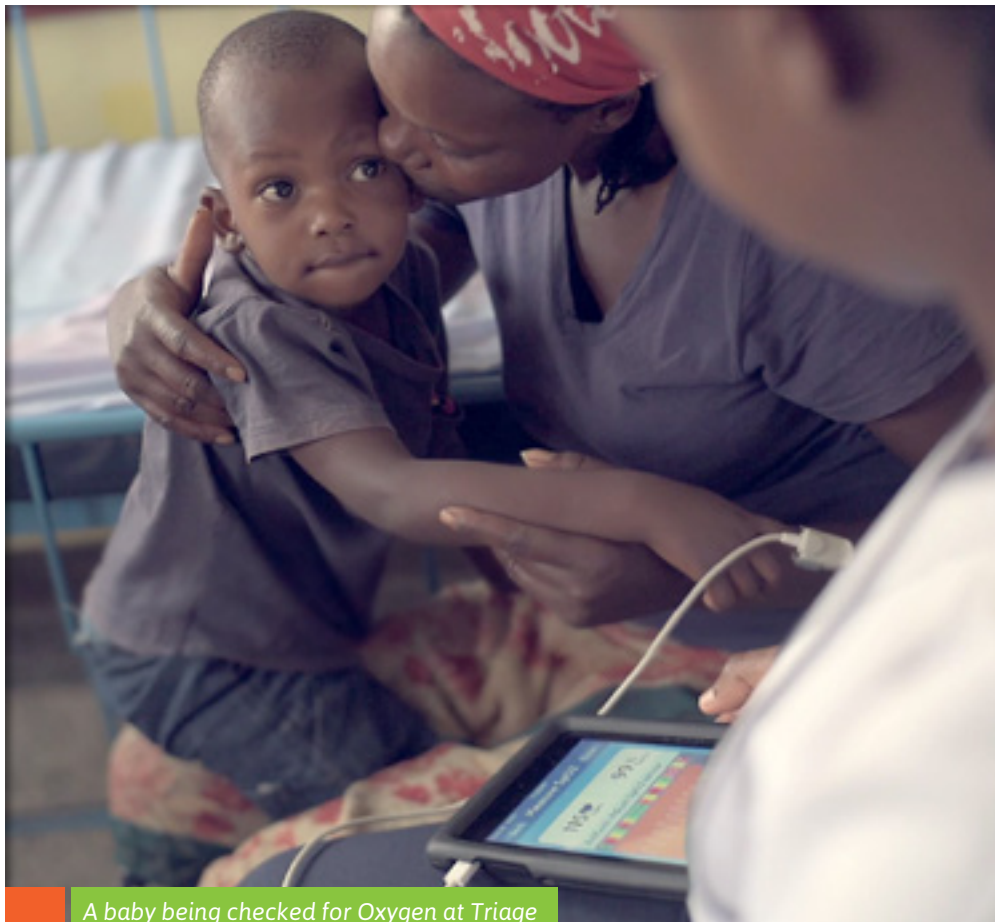
i. **Digital approaches to reducing time to treatment: The Smart Triage**



30167 children triaged,
600 health workers trained



In 2022, we continued to roll out our digital triage tool, the Smart Spot, a digital triage solution to track time to treatment at patient level using a Bluetooth beacon worn by a caregiver linked to dashboards at all service points in the Out-Patient Department. Smart Triage was rolled out to four additional sites in Uganda including Gulu Regional Referral Hospital, Holy Innocents Children's Hospital (HICH), Uganda Martyrs Ibanda Hospital, and St. Joseph's Kitovu Hospital.



A baby being checked for Oxygen at Triage

At Gulu Regional Referral Hospital, Uganda Martyrs Ibanda Hospital, and St. Joseph's Kitovu Hospital, we conducted baseline data collection to externally validate our risk predication model prior to implementing Smart Triage at each facility. Routine use of the Smart Triage platform is now ongoing at every site, with a combined 30167 children triaged since March 2022. Implementation at these four additional sites will improve generalizability of the risk prediction algorithms, improve customizability of reports and training materials, and further validate the automated tracking system. The UCMB hospital network serves a wide range of populations across Uganda and is located in predominantly rural regions. Our partnership with the UCMB will enable ongoing and future extension of this research within other hospitals in the UCMB network. The Smart Triage platform continues to be in regular clinical use within Jinja Regional Referral Hospital, with 14095 children triaged up to December 31, 2022.

Sustaining impact beyond our research award will require acceptance and cooperation from caregivers and family of children who present to health facilities and the general public who become participants within this new system. To support this work, we secured additional funding from Wellcome Trust's Research Enrichment – Public Engagement funding stream to conduct a sensitization campaign for Smart Triage targeted towards caregivers (funded by a 2022 WT Public Engagement Award). This aim of this campaign is to enhance the public's acceptance, cooperation, and willingness to participate in Smart Triage. As a first step, we completed community consultations with 5 local chairpersons and 40 Village Health Team members in September 2022 and will use the results to inform the messaging and delivery for our sensitization campaign.

In May 2022, we secured additional funding from GCC to partner with Innovation Streams (iStreams), a Ugandan IT company whose electronic medical record (EMR) platform, Streamline, is being used at public and private facilities in Uganda. We have successfully integrated our Smart Triage algorithm and dashboard features directly into the Streamline platform at Kisiizi Hospital and have begun discussions on implementing the Smart Triage algorithm at additional hospitals that use Streamline as their EMR.

In June 2022, we secured funding from the Canadian Institutes of Health Research to support a stakeholder meeting in Fall 2023 that will be focused on integrating our clinical risk predictions algorithms into existing electronic medical devices (e.g., vital sign sensors, electronic medical record (EMR) platforms) used by health providers in East Africa. The outcomes for this meeting will inform policy that prioritizes quality improvement using data-driven risk prediction and support the sustainability of Smart Triage.

To date, over 350 staff members have been trained on the Smart Triage platform and 250 in QI. Senior staff members continue to mentor medical students and staff who rotate through care points and facilities. Through facility-driven QI initiatives, staff have been able to improve the reach of Smart Triage by increasing triage hours into the afternoon and late evenings.

Additionally, we have recently developed an automated follow-up WhatsApp and Short Message Service (SMS) system to contact caregivers of children 7 days after their hospital visit. Caregivers are encouraged to respond with a set of standard responses. If the child has not improved a follow-up call conducted by a health worker is triggered. These follow up calls are imperative to ensuring we capture data on post-visit outcomes in our target population. Using automated system greatly reduces the workload compared to calling all caregivers, which will support further scaling. Currently, this system has been piloted at Gulu Regional Referral Hospital, where it has been used to collect post-visit outcomes.



Health workers at Uganda Martyrs Ibanda Hospital being trained in Smart Triage



A Nurse is preparing a green line-yard for the mother indicating that this is a “queue” patient during Triage

ii. Improving the transition from the health facility to community care; Smart Discharges

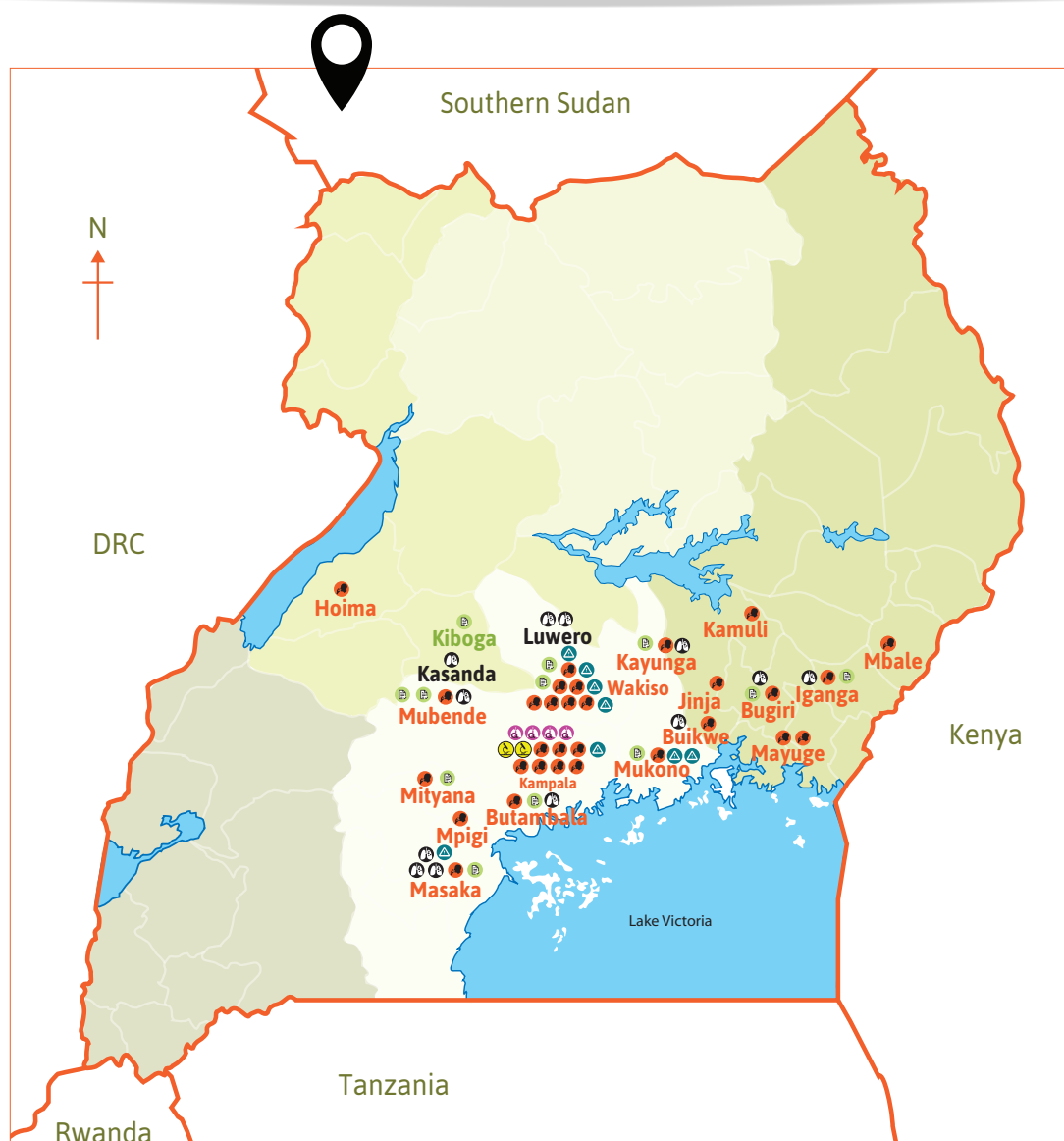
We have previously shown that when children are hospitalized for a serious infection, about five percent die during the admission and 95 percent are discharged, presumably well. We were able to design a training program for nurses and care givers. We have also shown that it is possible to use Village Health Teams to conduct post discharge follow up for vulnerable children. In 2022 we commenced work on a partnership to validate our risk prediction algorithms for refugee settings. This has since been funded by the Research for Health in Humanitarian Crises to begin in March 2023 in collaboration with the Centre for International Child Health at the University of British Columbia and the International Rescue Committee.

Building upon previous work, these works will characterize post-discharge mortality among vulnerable refugee children and assess the applicability of the Smart Discharges risk stratification model in this setting. Our primary objective is to refine and improve our existing prediction models in a population of children from refugee settings who are admitted at health facilities. These refined models will be used to expand the Smart Discharges program to also include this additional vulnerable population, thus ensuring high quality, evidenced based care is increasingly accessible to all children residing in Uganda

4.3 Implementation research for Tuberculosis

i. Implementation Science to accelerate appropriate and timely diagnosis and treatment for Tuberculosis Diagnostics

Thematic Area	Strategic Priority	Achievement
Implementation research for Tuberculosis	Innovation and Evidence Building	10 publications
	Health Research Platform	Four new collaborations
	Influencing Policy and Practice	Four conference presentations





Directly-Observed Therapy (DOT) to Digital Adherence Technology (DAT) for TB



Chase TB: Clinic versus Hotspot Active Case Finding and Linkage to TB Preventive Therapy (ACF/ TPT) Strategy Evaluation for Tuberculosis



Rapid Research in Diagnostics Development for TB Network (R2D2 TB Network Study)
"One Publication"



Human-Centered Design and Communities of Practice to Improve Delivery of TB Contact Investigation in Uganda (HCD-CoP)
"Seven Publications"



Validating a Clinical Risk Score for Early Management of Tuberculosis in Ugandan Primary Health Clinics – PredicTB study



Trace Ultra Result iNsight in TB screening (Turn TB)
"One Publication"

WALIMU is host to the Uganda TB Implementation Research Consortium (UTIRC). UTIRC is composed of the National Tuberculosis and Leprosy Program and researchers at different universities including Makerere University, Yale, University of California, San Francisco, New York University, John Hopkins University and the London School of Hygiene and Tropical Medicine. UTIRC advances a research agenda that supports the National TB program in achieving its thematic areas of the TB care cascade that is Promoting care seeking and prevention of TB in the community, accelerating appropriate and timely diagnosis for TB, and promoting appropriate treatment and ensuring cure.

Human-Centered Design and Communities of Practice to Improve Delivery of TB Contact Investigation in Uganda (HCD-CoP)

Active case-finding for undiagnosed TB patients in communities is essential to control and eliminate TB in high-burden countries. Almost 3 million people with active TB worldwide go undiagnosed each year globally. In Uganda approximately 18% of all the TB cases were undiagnosed in 2021. Household contact investigation is a high-yield strategy for finding undiagnosed TB patients however it is still unknown how to best implement contact investigation. Dr Lucian Davis, Dr Achilles Katamba and Mari Armstrong Hough and team have over the years used implementation science methods to understand its adaptation and effectiveness in order to optimize efficiency and effectiveness in its implementation.

In 2016, Davis et al and team identified major gaps in the quality of delivery of TB contact investigation in Kampala. And estimated that ~65% of household visits were completed, ~75% of contacts were screened, and

only 20% of eligible contacts completed TB evaluation and the cumulative conditional probability of a household TB contact completing TB evaluation was only 10%. The major barriers to effective implementation included stigma, cost/time to travel to clinic, and dissatisfaction with clinic services as major barriers and social support from lay health workers as the main facilitator of household contact investigation.

In 2017 & 2018 the team conducted a trial testing a home-based contact investigation strategy. While the trial did not improve TB evaluation or diagnosis compared to standard contact investigation, patient level barriers and health worker level barriers were identified. Some of them included: household contacts being reluctant to provide a sputum sample because of anticipated stigma from neighbors if seen or heard expectorating outdoors. In addition, community health workers were afraid of becoming infected with TB during sputum collection and transport, and had difficulty instructing contacts to successfully expectorate and there was generally low uptake of home based HIC testing services. None the less a home based strategy for TB Contact investigation was found to be a feasible strategy for active case finding and adopted by the Ministry of Health in 2019.

Implementation strategies for contact investigation must not only target barriers, but must also engage contacts and health workers to motivate action. Human-Centered Design (HCD) offers a powerful set of tools and methods for repackaging the core components of home-based contact investigation to make it more appealing to contacts and health workers, and ultimately more effective. The concept of the Community of Practice (CoP) offers a promising modality to tailor contact investigation to diverse settings by helping front-line implementers share best practices. Between 2020 and 2021 we designed, piloted and launched a trial testing an enhanced contact investigation trial that employs the principles of Human centered design and Communities of Practice. We are currently in the final stages of a stepped wedge cluster randomized trial comparing the implementation, effectiveness, and public health impact of an enhanced versus the usual strategy for implementation of TB contact investigation. A total of 12 health facilities in 10 districts are participating in this trial and over 40 Community Health workers, 60 Community Health riders and 50 Health workers have been trained to deliver the enhanced TB contact investigation strategy.

The team has also just completed a pilot study aimed at interrupting HIV and TB stigma in the household during contact investigation in Uganda (HIV TB Stigma). It includes a complex set of intervention using social networking theories to increase the uptake of home HIV testing and linkage to HIV care among household members offered home-based HIV testing. This pilot project was piloted at 2 health facilities in 1 district and trained approximately 16 Community Health Workers and 8 health workers to use social networking strategies to reduce stigma and facilitate household HIV testing.

From Directly-Observed Therapy (DOT) to Digital Adherence Technology (DAT) for TB

Following a successful pilot in 2018 and 2019, we implemented the DOT to DAT project to determine whether a 99DOTS-based strategy improves TB treatment outcomes compared to routine care. 99DOTS is a digital adherence technology involving placing the blister pack of TB medicines in a custom-designed envelope such that a new toll-free phone number is revealed when each day's pills are opened. After taking the pills, patients are asked to call the toll-free number. When a call is made, the 99DOTS system records that pills have been taken and transmits this information to health workers. The system also sends an SMS each day to remind patients to take their TB medicines.

With success registered yet again during the implementation phase, the 99DOTs has been included in the National Strategic Plan for Tuberculosis and Leprosy as part of patient-centered digital technology for adherence to TB treatment one of the ways for improving tuberculosis treatment success rates in Uganda.

There are current attempts at integrating the 99DOTS adherence module with national electronic case-based surveillance system (eCBSS) through the District Health information System (DHIS 2). This is work in progress with a proposed completion in 2023.

5. Internal Capability To Serve And Sustainability

WALIMU is certified for Good Financial Grant Practice at Silver Tier by the Global Grants Community of the Africa Academy of Sciences. The certification specifies standards for Governance, Finance, Procurement and Human Resources.

Governance

WALIMU expanded its Board of Directors to broaden the areas of expertise to match the growing needs of the organization.

Name	Field of Specialization	Institution of affiliation
Achilles Katamba, PhD Chair	Clinical Epidemiologist	Makerere University, Kampala
William Worodria, PhD	Physician	Mulago National Referral Hospital
John Davis Lucian, MD, MAS	Pulmonologist	Yale University, USA
Adithya Cattamanchi, MD, MAS	Pulmonologist	University of California, San Francisco
Shevin T. Jacob, MD, MPH	Infectious Diseases Physician	Liverpool School of Tropical Medicine, UK
Matthew O. Wiens, PhD	Epidemiologist	University of British Columbia, Canada
Elijah Goldberg, BA	Economics	USAID



Human Capital

As of December 31, 2022, the staff headcount was 165. As part of capacity building efforts, we conducted 22 trainings throughout the year majority being in the first quarter. As part of team building, we held our annual end of year get together on December 15, 2023.

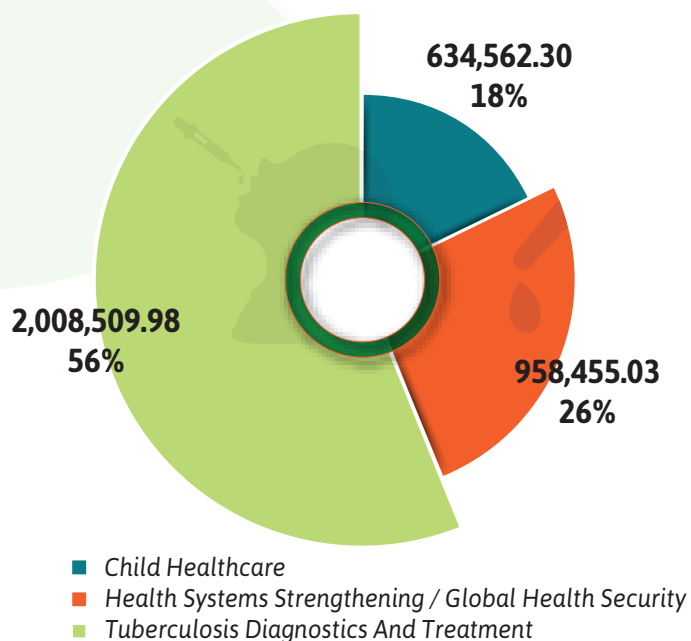
Management Team



Project and Study Coordinators Team		
Alex Kityamuwesi	Study Coordinator	MBChB, MCEB
Nantale Natalie Mariam	Study Coordinator	BLT, MPH
Sharon Nyesiga	Study Coordinator	MBChB, MMed
Musoke Muhammad	Study Coordinator	MBChB
Kitonsa Peter James	Study Coordinator	MBChB, MPH
Senvewo Richard Jonathan	Administrator	BA. SS
Priscilla Haguma	Study Coordinator	MMED, MSC
Claire Komugisha	Senior Research Officer	BPH, MPH
Patricia Turimumahoro	Medical Officer	MBChB, MPH
Core Support Team		
Catherine Kiggundu	Senior Accountant	B. COM (Finance)
Amanya Lamec	Accountant	B. COM (Finance)
Alfred Latim	Procurement and Logistics Officer	BPLM, PGDFM, CIPS4
Marion Kenkwanzi	HR and Administrative Assistant	BA. Econ
Olga Nakasolya	Human Resources Officer	BIOP, MAME,
Dorothy Namagembe	Stores and Inventory Officer	B. Tourism, PGDHRM
Agnes Sanyu Nakate	Administrative Assistant	BA. Community Psychology
Lawrence Ndawula	Accounts Assistant	BA. Accounting and Finance

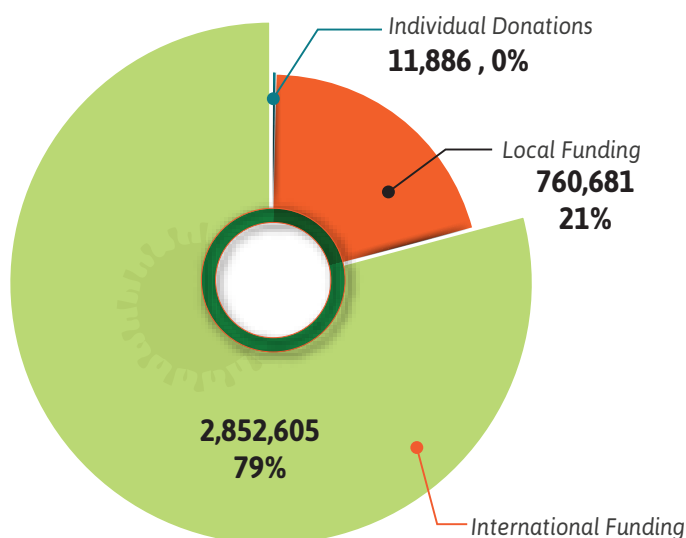
6: 2022 Financials

6.1 INCOME ANALYSIS ACROSS WALIMU THEMATIC AREAS



About half of the current grant portfolio is for towards implementation research for tuberculosis. One quarter of the funding is for non-research activities targeting health systems strengthening and global health security as part of translating evidence into action.

Income Analysis by Source



WALIMU's funding for 2022 was mainly from international donors contributing 79%. This was followed by locally sourced funds at 21% and a small contribution of 0.3% by individual donations.

6.2 Audited Financial statements 2022

STATEMENT OF INCOME AND EXPENDITURE AS AT DECEMBER 31ST 2022

	2022	2021	2020
	USD	USD	USD
Income			
Grant Income	3,547,289	2,411,504	1,379,179
Other Income	11,886	19,177	169
	3,559,175	2,430,681	1,379,348
Expenditure			
Project expenses	3,305,570	2,038,569	1,150,808
Administrative Expenses	253,605	392,112	228,540
Total Expenditure	3,559,175	2,430,681	1,379,348
Surplus for the year	-	-	-

STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER, 2022

	2022	2021	2020
	USD	USD	USD
ASSETS			
Non-current Assets			
Property and equipment	15,965	28,776	0
Current Assets			
Cash and cash equivalents	270,745	427,880	329,105
Receivables	45,661	25,290	32,683
Grant receivable	488,438	163,964	0
	804,844	617,134	361,788
Total Assets	820,809	645,910	361,788
FUNDS & LIABILITIES			
Liabilities			
Deferred income	353,392	378,542	303,525
Creditors and accruals	160,126	35,172	21,576
	513,518	413,714	325,101
Funds			
Unrestricted	291,326	203,420	35,176
Capital	15,965	28,776	1,511
Total Funds and Liabilities	307,291	232,196	36,687

The Accounts were audited by PKF Certified Public Accountants who provided an opinion that the financial statements give a true and fair view of the financial position of WALIMU as at 31 December 2022 and of its financial performance and cash flows for the year then ended in accordance with the accounting policies .

Funding

- i. Thrasher Research Foundation through Centre for International Child Health, BC Children's Hospital
- ii. Wellcome Trust through Centre for International Child Health, BC Children's Hospital
- iii. McGill University Health Centre
- iv. National Institute of Health through The John Hopkins University
- v. National Institute of Health through Yale University
- vi. National Institute of Health through University of California San Francisco
- vii. National Institute of Allergy and Infectious Diseases through The John Hopkins University
- viii. Canadian Institutes of Health Research through Research Services Children's Hospital Research Institute, University of British Columbia
- ix. National Heart, Lung, and Blood Institute through The John Hopkins University
- x. Wellcome Trust through Liverpool School of Tropical Medicine
- xi. The United Nations Office for Project Services UNOPS
- xii. Global Control of HPV Related Diseases Research Team, University of British Columbia through Centre for International Child Health, BC Children's Hospital
- xiii. Bill & Melinda Gates Foundation through The John Hopkins University
- xiv. World Health Organisation
- xv. Wellcome Trust through Centre for International Child Health, BC Children's Hospital
- xvi. BCCHF and Children's Global Care Microgrant Centre for International Child Health, BC Children's Hospital



Publications and conference presentations

Conference Abstracts

- i. At the Uganda MoH 9th National QI Conference 2022, two of our Ugandan partners presented abstracts on QI initiatives led by themselves and their respective hospital teams.
- ii. Abstracts were presented or accepted at the virtual World Federation of Pediatric Intensive & Critical Care Societies Congress (WFPICCS) 2022. A pre-congress workshop was held on Data-Driven Sepsis Research featuring presentations by Dr Pillay on model building and data management, and Dr Tagoola on Smart Triage + QI at JRRH.
- iii. In November 2022, Dr Akech led a panel at the American Society of Tropical Medicine & Hygiene Annual Meeting (ASTMH) on innovations in data-driven approaches to improve sepsis care for children where he presented on Smart Triage + QI. Additionally, Dr Akech presented at the University of British Columbia's Pediatric Grand Rounds on the use of Smart Triage in Kenya.
- iv. Abstracts were also presented or accepted at the Consortium of Universities for Global Health Congress 2022, UBC Global Health Conference 2022, and the Women's Health Research Institute/BC Children's Hospital Digital Health Week 2021. Our Ugandan partners were editors, contributors, and co-authors for these abstracts.
- v. Bose R, Komugisha C, Novakowski S, Businge S, Tagoola A, Ansermino JM, Kissoon N, Ikankyenga J, Kumbakumba E, Kenya-Mugisha N, Wiens M. Factors associated with discharge against medical advice among children treated for suspected or proven infections at Ugandan hospitals. Oral presentation: WFPICCS Congress 2022, 12-16 July 2022
- vi. Knappett M, Komugisha C, Trawin J, Mwaka S, Knappett M, Bamwesigye E, Agaba C, Nsungwa-Sabiiti J, Waiswa P, Ansermino JM, Kissoon N, Kenya-Mugisha K, Wiens M. Health Worker and Caregiver Perspectives of the Pediatric Discharge Process in Uganda. E-poster presentation: WFPICCS Congress 2022, 12-16 July 2022
- vii. Kabajaasi O, Nemetchek B, Trawin J, Knappett M, Waiswa P, Nsungwa-Sabiiti J, Ansermino JM, Kissoon N, Nathan-Mugisha K, Wiens M. Pediatric discharges in Uganda: Development of a discharge model of care. E-poster presentation: WFPICCS Congress 2022, 12-16 July 2022



- viii. Pillay Y, Ngonzi J, Bone J, Christoffersen-Deb A, Payne B, Vidler M., Lavoie P, Bebell L, Kenya-Mugisha N, Kissoon N, Ansermino JM, Wiens MO. Smart Discharges for Mom & Baby: Targeted follow-up after facility delivery with accurate predictions of neonatal and maternal morbidity or mortality. E-Poster Presentation: WFPICCS Congress 2022, 12-16 July 2022; Centre for International and Child Health (CICH) at BC Children's and Women's Hospital and the School of Population and Public Health at the University of British Columbia 4th Annual Global Health Conference, April 2022.
- ix. Novakowski SK, Li C, Bone J, A Tagoola A, C Komugisha C, E Kumbakumba E, J Kabakyenga J, Ansermino JM, N Kenya-Mugisha N, Kissoon N, M Wiens MO. (2022). "Impact of COVID-19 on post-discharge outcomes for pediatric patients admitted to 6 hospitals across Southern Uganda." Poster presentation at: Consortium of Universities for Global Health 2022 Virtual Congress; Virtual.
- x. Trawin J, Komugisha C, Mwaka S, Knappett M, Bamwesigye E, Agaba c, Nsungwa-Sabiiti J, Waiswa P, Ansermino JM, Kissoon N, Kenya-Mugisha K, Wiens M. Pediatric discharges in Uganda: Facility procedures and practices. E-poster presentation: WFPICCS Congress 2022, 12-16 July 2022
- xi. Zandi Nia S, Sharma AK, Kissoon J, Kabekyenga J, Kumbakumba E, Tagoola A, Kenya-Mugisha N, Ansermino JM, Wiens MO. Admission lactate does not improve the prediction of in hospital mortality in children in Uganda. E-poster presentation: WFPICCS Congress 2022, 12-16 July 2022
- xii. Zandi Nia S, Ginsburg AS, Chomba D, Dunsmuir D, Maiyego M, Coleman J, Ochieng R, Liu s, Zhou G, Ansermino JM, Macharia WM. Clinical feasibility of a contactless multiparameter continuous monitoring technology for neonates in a large public maternity hospital in Nairobi, Kenya. E-poster presentation: CUGH 2022, 21-25 March 2022,
- xiii. Feasibility of a Cash Transfer Intervention to Improve TB Diagnostic Evaluation in Uganda - poster presentation at the 52nd conference on lung health.
- xiv. The impact of cash transfers on tuberculosis diagnostic evaluation outcomes (ExaCT TB): a stepped wedge cluster randomized controlled trial - oral presentation at the 52 conference on lung health.
- xv. The effect of social and structural determinants on patient completion of tuberculosis diagnostic evaluation – oral presentation at the 52nd conference on lung health
- xvi. M Nantale, S Steinmetz, A Nalutaaya, C Kamoga, PJ Kitonsa, J Mukiibi, DW Dowdy, AKatamba, EA Kendall: Evidence of active TB among individuals with a trace result on Gene Xpert MTB /RIF Ultra during community-based TB screening in Kampala, Uganda

Publications in 2022

- i. Mawji A, Longstaff H, Trawin J, Dunsmuir D, Komugisha C, Novakowski SK, Wiens MO, Akech S, Tagoola A, Kissoon N, Ansermino JM. A proposed de-identification framework for a cohort of children presenting at a health facility in Uganda. *PLOS Digital Health*. 2022 Aug 24;1(8): e0000027.
- ii. Novakowski SK, Kabajaasi O, Kinshella MW, Pillay Y, Johnson T, Dunsmuir D, Pallot K, Rigg J, Kenya-Mugisha N, Opar BT, Ansermino JM, Tagoola A, Kissoon N. Health worker perspectives of Smart Triage, a digital triaging platform for quality improvement at a referral hospital in Uganda: a qualitative analysis. *BMC Pediatrics*. 2022 Oct 13;22(1):593. doi: 10.1186/s12887-022-03627-1. PMID: 36229790; PMCID: PMC9557985.
- iii. Mawji A, Li E, Dunsmuir D, Komugisha C, Novakowski SK, Wiens MO, Vesuvius TA, Kissoon N, Ansermino JM. Smart triage: Development of a rapid pediatric triage algorithm for use in low-and-middle income countries. *Frontiers in Pediatrics*. 2022 Nov 22; 10:976870. doi: 10.3389/fped.2022.976870. PMID: 36483471; PMCID: PMC9723221.
- iv. Repeatability of pulse oximetry measurements in children during triage in two Ugandan hospital; medRxiv; 2022; Ahmad Asdo, Alishah Mawji, Collins Agaba, Clare Komugisha, Stefanie Novakowski, Yashodani Pillay, Stephen Kamau, Matthew Wiens, Samuel Akech, Abner Tagoola, Niranjana Kissoon, J Mark Ansermino, Dustin Dunsmuir; doi: <https://doi.org/10.1101/2022.12.21.22283800>
- v. Hennein R, Nanziri LM, Musinguzi J, Ggita JM, Turimumahoro P, Ochom E, Gupta AJ, Halder A, Katamba A, White MA, Pietrzak RH, Armstrong-Hough M, Davis JL. Cultural Adaptation and Validation of the General Self-Efficacy Scale in Ugandan Community Health Workers. *Global Implementation Research and Applications*. 2022. doi: 10.1007/s43477-022-00064-1
- vi. Hennein R, Ggita JM, Turimumahoro P, Ochom E, Gupta AJ, Katamba A, Armstrong-Hough M, Davis JL. Core components of a Community of Practice to improve community health worker performance: a qualitative study. *Implementation Science Communications*. 2022;3(27).
- vii. Davis JL, Ayakaka I, Ggita JM, Ochom E, Babirye D, Turimumahoro P, Gupta AJ, Mugabe FR, Armstrong-Hough M, Cattamanchi A, Katamba A. Theory-Informed Design of a Tailored Strategy for Implementing Household TB Contact Investigation in Uganda. *Front. Public Health*. 2022;10: 837211.

- viii. Liu C, Lee JH, Gupta AJ, Tucker A, Larkin C, Turimumahoro P, Katamba A, Davis JL, Dowdy DW. Cost-effectiveness analysis of human-Centered design for global health interventions: a quantitative framework. *BMJ Global Health*. 2022;7(3).
- ix. Turimumahoro P, Tucker A, Gupta AJ, Tampi RP, Babirye D, Ochom E, Ggita JM, Ayakaka I, Sohn H, Katamba A, Dowdy D, Davis JL. A cost analysis of implementing mobile health facilitated tuberculosis contact investigation in a low-income setting. *PLOS ONE*. 2022;17(4): e0265033.
- x. Armstrong-Hough M, Ggita J, Gupta AJ, Shelby T, Nangendo J, Ayen DO, Davis JL, Katamba A. Assessing a norming intervention to promote acceptance of HIV testing and reduce stigma during household tuberculosis contact investigation: protocol for a cluster-randomized trial. *BMJ Open*. 2022;12(5): e061508.
- xi. Ayakaka I, Armstrong-Hough M, Hannaford A, Ggita JM, Turimumahoro P, Katamba A, Katahoire A, Cattamanchi A, Shenoi SV, Davis JL. Perceptions, preferences, and experiences of tuberculosis education and counselling among patients and providers in Kampala, Uganda: A qualitative study. *Global Public Health*. 2022. doi: i. A Prospective Evaluation of Xpert MTB/RIF Ultra for Childhood Pulmonary Tuberculosis in Uganda. *Journal of the Pediatric Infectious Diseases Society*, 10(5), 586-592.
- xii. Jaganath, D., Reza, T. F., Wambi, P., Nakafeero, J., Kiconco, E., Nanyonga, G., ... & Cattamanchi, A. (2022). The role of C-reactive protein as a triage tool for pulmonary tuberculosis in children. *Journal of the Pediatric Infectious Diseases Society*, 11(7), 316-321.
- xiii. Accuracy of Tongue Swab Testing Using Xpert MTB-RIF Ultra for Tuberculosis Diagnosis <https://doi.org/10.1128/jcm.00421-22>



Unit 4, Plot 5-7, Coral Crescent - Kololo
P.O Box 9924, Kampala Uganda
Tel: +256 393 100 301
Email: info@walimu.org
Web: www.walimu.org



WalimuNGO



WalimuNGO



Walimu