INTRODUCTION

“All healthcare systems have seemingly unlimited needs and demands placed upon them, but limited resources with which to meet them. Thanzi la Onse draws together the expertise of UK and African researchers, who work collaboratively with policy-makers and community representatives to address this challenge of resource allocation. There is something distinct about public universities working with mandated government officials that facilitates joint learning, creates social capital and builds an environment for better-inform policy.” Paul Revill, Professor at the University of York and TLO Programme Director

“At the East, Central and Southern Africa Health Community (ECSA-HC) we coordinate and support ministries of health and academic institutions in our 9 member states (Eswatini, Kenya, Lesotho, Malawi, Mauritius, Tanzania, Uganda, Zambia, Zimbabwe) to address major health challenges across the region. Thanzi la Onse has helped to bring research closer to policymakers’ needs, around our common aim of using limited resources to improve population health”. Edward Kataika, Director of Programmes, ECSA-HC and TLO Co-Investigator

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PROJECT FUNDERS

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EXECUTIVE SUMMARY

Thanzi la Onse (Health for All) Mission Statement

All healthcare systems face a difficult conundrum: the health needs within the country can be vast, but funding for health care provision is often not adequate to meet them. In countries with particularly constrained budgets, such as Malawi and Uganda, the process of allocating limited budgets to address competing health care obligations and needs is particularly challenging, involving difficult choices among many healthcare interventions and opportunities. When resources are scarce, the consequences of getting these decisions wrong are potentially severe in terms of forgone benefits and often growing inequalities.

The GCRF-funded Thanzi la Onse Health of All (TLO) programme provides high quality research, frameworks and tools to support the prioritisation of resources in low-income settings and enhance the efficiency and equity of health care provision with the ultimate goal of improving population health. Bringing together world-leading experts in health economics, epidemiological modelling and political science, the programme has pioneered new approaches for evidence generation over the last four years; developing innovative model frameworks, methods and tools to assess the disease burden within LMIC settings and inform health care decision making.

Groundbreaking capability building initiatives have also been delivered, through the generation of new and locally-relevant research evidence alongside upskilling TLO’s key research areas among policymakers and local academic experts.

Research-Policy Partnerships

Led by an interdisciplinary network of collaborators based in the UK, Malawi, Uganda and the wider East, Central and Southern Africa region, the TLO programme has become a leading model for high quality research and has championed research-to-policy engagement.

Through its commitment to collaboration and partnerships with ministries of health, health organisations and national universities across Southern and East Africa, the programme has generated a two-way benefit: enabling researchers to generate evidence to support decision-making and allowing policymakers to shape the research being produced. This new, exciting approach and commitment to research-policy engagement has led to the development of a number of initiatives and research outputs within the TLO portfolio, which respond directly to the challenges voiced by decision-makers in the region (read more on pages 4-6), including the facilitation of knowledge-sharing and capability building initiatives, to enhance training and research capacity in Sub-Saharan Africa (read more on pages 8-9).

Future Ambitions

This commitment to high-quality research, capacity development and policy engagement to ensure value for money health care will support low-income countries in taking greater control over the health policies and guidelines implemented in their own setting (a move which is supported by the World Health Organisation) and has attracted further interest from other African nations, who are keen to explore how this approach can be applied in other settings. Read on to learn more about the specific initiatives and outputs which have been delivered by TLO collaborators.
The strength of the TLO’s interdisciplinary partnerships in Malawi, Uganda and the wider ECSA-HC region lies at the centre of the programme and has created a unique opportunity for collaboration, knowledge sharing and capacity building. In response to the need for greater research-to-policy engagement between UK, Malawian and Ugandan researchers and policy makers, TLO has established two Health Economics & Policy Units (HEPU) with national Ministries of Health and public universities in Malawi and Uganda; providing key platforms for discussion and shared insight on priority health needs and emerging research to guide future health policies and resource allocation.

Working in partnership with the ECSA-HC, TLO has delivered initiatives to strengthen health economics capability for researchers and policy-makers, and subsequently support the appropriate use of research and evidence in policy formulation. The formation of the ECSA-HC Health Economics Community of Practice in 2019 has been particularly impactful in providing a forum for COP members to share best practices on health policy and identify priority training needs in the region, leading to the launch of the ECSA-HC Global Health Economics webinar series and the Global Health Economics knowledge hub: an online knowledge sharing and engagement platform which supports health economics research capability and its use within policy in low- and middle-income settings.

Building upon these initiatives, work is ongoing to sustain and expand HEPU research-to-policy initiatives in the future and establish and support ECSA-HC and West Africa Health Organisation (WAHO) Health Economics Communities of Practice, to continue to facilitate collaboration and shared learning among researchers and policy-makers in the region.
RESEARCH

Theme 1: Epidemiological Modelling

In response to the need for more evidence to support resource allocation decision making processes in Malawi, researchers and modellers at Imperial College and University College London have partnered with the College of Medicine in Malawi to develop a "whole system and all-disease model" for the Malawi health system. The first of its kind, the TLO Model uses an individual-based ‘next generation’ approach and groundbreaking simulation technology to generate information about lifetime health, which enables the tool to address questions and challenges specific to the Malawi context. This framework concept has been well-received in Malawi, and researchers and modellers have engaged in a series of technical discussions with stakeholders to discuss how the Model will contribute to decisions around health sector reforms and the introduction of new interventions in future (read more on page 8). The acute need for epidemiological research has been made particularly evident during the COVID-19 pandemic, where modelling techniques and practical tools provided the means to translate important data into evidence, for use in global health policy and practice.

Health sector resource allocation: determining how health care resources can be allocated across the whole health care system using tools such as health benefits packages and resource allocation formulas.

Economics of health systems constraints, strengthening and service interventions: informing cross-cutting investments in health care systems as well as in the direct delivery of clinical interventions.

Determinants of health and inter-sectoral allocation: investigating how population health care can be improved through means other than health care delivery, and how this should be funded.

Markets and Incentives: ensuring delivery of the right kinds of health care through activities such as embedding incentives within health care systems, using insights from industrial organisation.

Guiding research activities: informing the design of research and evidence generation activities that are most likely to lead to health improvement and reduction in population health inequalities.

Theme 2: Health Economics

Led by the expertise of over 20 health economics researchers based in Malawi, Uganda, the UK and the wider East Central and Southern Africa (ECSA) region, TLO health economics research is distinguished by the integration of theory, economic analysis methods development and real-world applications, to determine how health care resources can be allocated to strengthen systems and address population needs. Research is divided into five health economics work-package topic areas, including:

Health sector resource allocation:

Economics of health systems constraints, strengthening and service interventions:

Determinants of health and inter-sectoral allocation:

Markets and Incentives:

Guiding research activities:

Theme 3: Politics & Governance

Researchers at the Politics Department, University of York, Overseas Development Institute, and College of Medicine (Malawi) work closely with government representatives, stakeholders and policy-makers to better understand the national and regional political context in which health decisions are made. This understanding of the challenges to effective governance within the Malawi healthcare system and insight into health policy priorities has been the cornerstone for the programme: enabling researchers to gain direct insight from regional stakeholders on the political, structural and financial challenges being experienced, and successfully translate
this knowledge into practical, contextual-relevant recommendations and solutions. One output being delivered within Theme 3 is focussed upon Public Financial Management (PFM); looking specifically at the policy processes being implemented by governments to manage expenditure, and exploring the common interests between PFM and strategic purchasing, which can enhance long-term spending efficiency.

**TLO in Practice: the Thanzi la Onse “whole system and all-disease model”**

**Why was the model developed?**

The core aim of the TLO Model is to establish a better understanding of the Malawi health system and assess how resources can and should be allocated to maximise population health. To date, most disease modelling has focussed upon one specific disease area or taken a ‘one intervention at a time’ approach, which has led to very specific cost effectiveness analyses results that do not reflect the health system context of the country as a whole. By contrast, the TLO Model takes a holistic approach for the Malawi health system. By focussing on generating analyses at the individual-level, this new ‘whole system model’ approach enables researchers to build a comprehensive picture about the country and develop a clearer understanding about the interaction between diseases and interventions; thereby helping to more accurately determine which options offer the greatest potential impact and, crucially, the greatest value for money.

**What are the ambitions for the model?**

The overarching goal for this ambitious epidemiology and modelling workstream is to create a model of the Malawi health system which provides useful evidence to support policy decision-making around new health sector intervention implementation, and help inform the next Health Sector Strategic Plan for Malawi (HSSP3). The next phase of model development will focus upon (i) continued collaboration with the Malawi Ministry of Health to further calibrate the framework with the health system and increase capacity for decision-makers to utilise the Model; and (ii) to expand the Model approach to apply to other country settings within the ECSA-HC region. Published documentation regarding the Model can be found on the [Thanzi la Onse Model website](#).

**TLO in Practice: REfugees in Africa ClusTer (REACT)**

This GCRF Clusters-funded project was established in 2020 as a “spin-off” from TLO and fellow GCRF ‘Grow Award’ project RECAP (based at London School of Hygiene and Tropical Medicine), to investigate the health challenges of refugee and host populations in Africa. The project forged partnerships with the ECSA Health Community as well as two major research institutes based in Uganda and Kenya (Makerere University, School of Public Health and KEMRI-Wellcome Trust) to support national capacity-strengthening and research in gender responsive resource allocation, health care organisation and policy decision-making for more efficient and equitable responses to refugee and community health needs in the ECSA region.

**A synthesis of key aspects of health systems and policy design affecting the refugee populations in Uganda** (Fred Matovu, Chrispus Mayora), February 2021

**A situation analysis of access to refugee health services in Kenya: Gaps and recommendations – A literature review** (Julie Jemutai, Kui Muraya, Primus Che Chi, Stephen Mulupi), January 2021

**A synthesis of key aspects of health systems and policy design affecting the refugee populations across Africa Report Structure** (Federica Margini), December 2020
# TLO PUBLICATIONS

<table>
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<th>Thanzi la Onse Publications</th>
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| **Theme 1** | The potential impact of intervention strategies on COVID-19 transmission in Malawi: A mathematical modelling study (forthcoming)  
Authors: Tara Mangal, Charlie Whittaker, Dominic Nkhoma, Wingston Ng'ambi, Oliver Watson, Patrick Walker, Azra Ghani, Paul Revill, Tim Colbourn, Andrew Phillips, Timothy Hallett, Joseph Mfutso-Bengo |
| **Theme 1** | Factors associated with healthcare seeking behaviour for children in Malawi: 2016  
Authors: Wingston Ng'ambi, Tara Mangal, Andrew Phillips, Tim Colbourn, Joseph Mfutso-Bengo, Paul Revill, Timothy Hallett |
| **Theme 2** | Allocating resources to support universal health coverage: development of a geographical funding formula in Malawi  
Authors: Finn McGuire, Paul Revill, Pakwanja Twea, Sakshi Mohan, Gerald Manthalu, Peter C. Smith |
| **Theme 2** | Allocating resources to support universal health coverage: policy processes and implementation in Malawi  
Authors: Pakwanja Twea, Gerald Manthalu, Sakshi Mohan |
| **Theme 3** | Challenges to effective governance in a low income healthcare system: a qualitative study of stakeholder perceptions in Malawi  
Authors: Sarah C. Masefield, Alan Msosa, Jean Grugel |
| **Theme 3** | Direct financing of primary health facilities in sub-Saharan Africa: are there any lessons for Malawi? (forthcoming)  
Authors: Tom Hart, Takondwa Mwase |

To view the full list of Thanzi la Onse publications, please visit the TLO project website.

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## TLO in Practice: TLO Resource Allocation Methods Guides

TLO has produced a number of comprehensive guides and resources with practical methods and tools to help allocate healthcare resources. Find further details on the TLO website and GHE Hub.

- **Health Financing Policy Reforms for Universal Health Coverage in Eastern, Central and Southern Africa (ECSA)- Health Community Region** | Takondwa Mwase
- **Incorporating concerns for equity into health resource allocation: A guide for practitioners** | James Love-Koh, Susan Griffin, Edward Kataika, Paul Revill, Sibusiso Sibandze, Simon Walker
- **Economic Analysis for Health Benefits Package Design** | James Love-Koh, Simon Walker, Edward Kataika, Sibusiso Sibandze, Matthias Arnold, Jessica Ochalek, Susan Griffin, Paul Revill, Mark Sculpher
- **Global Health Economics Shaping Health Policy in Low- and Middle-Income Countries** | Paul Revill, Marc Suhrcke, Rodrigo Moreno Serra, Mark Sculpher
In partnership with the ECSA Health Community and national Ministries of Health in the region, TLO has established efficient platforms to engage with senior government officials and decision-makers across the region to disseminate research findings and discuss the specific challenges affecting their resource allocation decisions. These partnerships play a fundamental role in linking academic research with policy needs, pinpointing where research can have the greatest impact e.g. the implementation of a framework for the design of a revised Essential Health Package (EHP) in Malawi, and the development of policy processes and geographical resource allocation methods for Malawi to support broader universal health coverage goals.

**Trusted and relevant expertise**

TLO is proud of its strong partnerships with local decision-makers and analysts working in the Ministries of Health in Malawi, Uganda and the wider East Central and Southern Africa region. These relationships have been forged over several years, and are based upon an ethos of mutual trust and respect. TLO’s research is co-designed with decision-makers; grounding it in national priorities, and generating evidence and methods which can be directly applied to real-world challenges.

**Research owned at the local level**

Engagement between TLO researchers and policy stakeholders is facilitated through various channels coordinated by the TLO teams at the College of Medicine (Malawi) and Makerere School of Public Health (Uganda). As national public universities, they have a uniquely strong and influential relationship with decision-makers, yet enjoy the benefits of working as independent research institutes with the authority to advise politicians. In TLO, we believe this is the optimal method of policy engagement in order to promote equitable research and capability building that generates tangible impact.

**Applying methods to other contexts**

The policy-engagement approaches honed in Malawi and Uganda, coupled with the innovative research methods to support resource allocation, have generated interest across Africa. In collaboration with the ECSA Health Community and West African Health Organization, TLO is working with public universities and Ministries of Health in Eswatini, Ghana, the Gambia, Senegal and Zimbabwe to establish similar academic-policy engagement strategies. Read more: [Research-to-policy partnerships: future plans for extending TLO’s approach in the ECSA and West Africa regions](#).

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**TLO in Practice: Health Economics and Policy Unit (HEPU) and Program (HEPP)**

In 2018, TLO supported the establishment of the Health Economics & Policy Unit (HEPU) at the College of Medicine in Malawi: a centre where policy-makers, researchers and other stakeholders come together and generate research questions and evidence to help inform policies. The HEPU offers an invaluable platform for training, capacity building and research-policy engagement: several high-level Think Tank and Policy Lab meetings were held in Malawi during 2020 and 2021, convening key stakeholders and decision-makers to discuss major health challenges and response strategies. A curriculum for the Masters of Science in Global Health Economics has also been developed as part of wider efforts to strengthen training in health economics within Malawi and the ECSA region. Inspired by the Malawi HEPU structure, the Health Economics Policy Programme (HEPP) was established in 2020 by Makerere University School of Public Health in partnership with TLO and the Uganda Ministry of Health to support the operations of the MOH’s Health Economic Unit (HEU).
What is the purpose of the meetings?
Since September 2020, TLO has held a series of modelling technical HEPU Think Tank meetings in Malawi with Ministry of Health Directors and senior clinical experts. During these virtual meetings, members of TLO’s epidemiological and modelling team from the College of Medicine, Imperial College and University College London, present on progress with developing disease cluster modules of the Thanzi la Onse Malawi Model. Local experts are invited to scrutinise the Model against their needs and advise on adjustments or additions which could improve the end product. As future users of the Model, these meetings also provide a platform through which local experts can learn more about the Model and take ownership of its design. It is our hope that this will ensure greater uptake of the finalised Model.

Local experts also contribute towards sourcing relevant local data for inclusion in the Model; data are such an important resource that determines the quality and accuracy of the Model’s simulations, making this local expertise extremely valuable.

What is the future for modelling engagement with local experts?
The Thanzi la Onse Model is not a static product, and will continue to be refined and expanded beyond the end of TLO Phase 1. As part of the sister-project Thanzi la Mawa (Health of Tomorrow) currently under consideration for funding by the Wellcome Trust, the epidemiological modelling team plan to establish an on-going series of locally-led “hackathons” in Malawi where local users, modelling/clinical experts, and epidemiologists can come together for short, intense and focussed workshops to design new, or enhance existing, Model modules to meet specific needs.

CAPABILITY BUILDING

National level
Capability building is interwoven into all areas of the TLO project with the aim of facilitating knowledge sharing and building long-term capacity among both researchers and policy-makers.

The launch of the Health, Economics & Policy Unit at the College of Medicine in Malawi (2018) and the Health Economics & Policy Programme at Makerere University School of Public Health in Uganda (2020) has created strong links between academic institutions and their Ministries of Health with the aim of enhancing the quality and quantity of health economics and policy research in the region. Both Units are in the process of developing Health Economics MSc course curriculums, which will offer much sought-after skills development, with plans for summer lectures to be delivered by visiting TLO teams. We are also proud to support career pathways in global health through direct learning opportunities, through funded PhD places and employed roles, mentoring and joint learning experiences and by hosting training events for ODI health fellows as part of the annual ODI Fellowship Scheme training days.

Regional level
TLO is committed to supporting training and facilitating research-policy engagement and actively works with partners to identify and address training gaps and needs in Malawi, Uganda and the wider region.

TLO has partnered with the East, Central and Southern Africa Health Community (ECSA-HC) to deliver a series of Global Health Community of Practice workshops, webinars and training events designed to support the development of applied health economics expertise, which
are attended by representatives from all nine ECSA-HC member countries and MOH representatives. Not only have these activities offered highly successful platforms for knowledge sharing and discussion, but they have also inspired partners to produce a research report on health economics training in the ECSA region and further briefs setting out recommendations for how workshop topics could be applied in future.

**International level**

TLO works closely with the ECSA-HC and the Oxford University’s Global Health Network to coordinate the Global Health Economics Hub: an open access community of practice to support health economics research capability and its use within policy in low- and middle-income settings. The online platform is the Network’s first ‘knowledge hub’ devoted to Global Health Economics and offers a dedicated training and engagement platform for the global health economics community to share knowledge, collaborate and access resources for career development (the Hub currently has over 1,500 subscribers).

Designed to help address the priority need identified during ECSA-HC Community of Practice meetings - to support the local ECSA community in strengthening health economics capacity in the region - the Hub houses an impressive repository of webinars, in-country and distance learning health economics teaching materials and dedicated discussion spaces: all of which are suitable for a wide range of researchers in low-income settings, as well as professionals working in government and various parts of health system.

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**TLO in Practice: Global Health Economics Hub in Numbers**

TLO and ECSA-HC launched the Global Health Economics Hub in 2020: a dedicated engagement and training platform for the global health economics community to access training resources, webinars, publications and forums on health economics topics. The Hub’s global reach has grown rapidly during the first year, and longer-term plans are in development for the site to expand the portfolio of resources and engagement activities. Further details can be found on the TLO website.

- **455** Average number of sessions/visits to the Hub each month
- **1,500+** Subscribers to the Global Health Economics Hub
- **39** Training materials: lectures, short course exercises, resources
- **10** Webinars posted on global health economics topics

“The limited appreciation of health economics as a discipline and the role it can play in health sector development is of concern. The Global Health Economics Network is thus a very welcome resource that not only builds skills but also provides evidence on critical issues bringing together policymakers and researchers. We would like to see the Network reach more countries and mobilize the participation of ministries of finance and civil society.” *Juliet Nabyonga, Team Leader, Health Financing and Investment program, WHO Africa Regional office*
FUTURE AMBITIONS

As we come to the end of the first phase of Thanzi la Onse, we are turning our attention to what comes next and how we can maintain and build upon this important work. As well as continuing to develop the networks in Malawi and Uganda, we are also extending this work across Africa, with policy and academic partners keen to be part of this in countries including Eswatini, The Gambia, Ghana, Senegal and Zimbabwe.

We have also expanded our engagement with regional healthcare stakeholders and, as well as collaborating with ECSA-HC on future activity, we will also be bringing in the expertise of regional-level policy maker partners from the West African Health Organisation (WAHO) and the World Health Organisation (WHO-Afro), in the development of the ‘stage 2’ studies Thanzi la Mawa (Health of Tomorrow) and Thanzi la Onse-Africa to continue the work initiated by Thanzi la Onse and guide resource allocation across health care systems.

We are actively seeking delivery partners and funding to continue and expand this important work, if you wish to engage in this please get in touch.

POST-2021 OBJECTIVES

➢ Continuation of established partnerships through legacy projects
➢ Expansion of HEPU platforms and sustained impact through established platforms
➢ Implementation of Model accompanied by continued research-to-policy knowledge sharing
➢ Collaboration with emerging partners to adapt methods and strategies in other LMIC settings

https://thanzi.org/