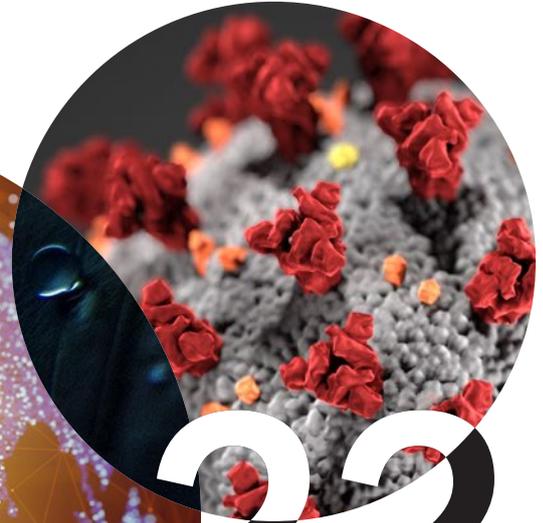


**ANNUAL
REPORT**

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Throughout 2021/2022, Oriole Global Health continued to expand its client base and portfolio across Africa, Asia and Europe. Delivering expertise across health research, health systems and health data, Oriole Global Health supported new and existing clients to identify current and future health challenges and formulate robust and scalable solutions.

Following on from the United Kingdom's Accelerating the Sustainable Control and Elimination of Neglected Tropical Diseases, **a £100m programme across 12 countries**, which Oriole Global Health was a key technical partner, new clients were secured, including the Bill and Melinda Gates Foundation, Epicentre, Children's Investment Fund Foundation, and The END Fund.

Oriole Global Health's technical expertise proved highly relevant during the COVID-19 pandemic, whereby our team engaged with health ministries across Africa and Asia to complete rapid needs assessments of government responses to the pandemic. At the request of the UK's Foreign and Commonwealth

Development Office, Oriole Global Health identified priorities for emergency funding and chaired a subsequent cross country round table, with technical teams close to partner ministries. This facilitated knowledge and experience exchange.

Oriole Global Health is committed to health system strengthening and sustainability. Through direct technical assistance, Oriole Global Health has advanced health programmes and policies in over 14 countries. Delivering innovative solutions to strengthen implementer capacity, digital data capture and improved monitoring, evaluation and learning, thereby promoting national ownership of Health Information systems.

Following the establishment of new offices in Canada and Sudan, we look forward to continued relationships with our existing clients while expanding our reach and engagement with development partners, governments and the private sector.

*Professor Sir Roy Anderson FRS FMedSc
Chairman, Oriole Global Health*



MISSION

Oriole Global Health works with partners to improve health outcomes towards the realisation of universal health coverage. Expertise across health research, health systems and health data are applied to accurately record current and future health challenges and formulate robust and scalable solutions.

Oriole Global Health consists of scientific and technical experts delivering services across three work streams: Health Research, Health Systems and Health Data.

HEALTH RESEARCH

OGH supports partners to make informed decisions; improve research and research uptake; and benefit from improved research capacity and knowledge transfer. Our health research includes a range of disciplines, including data collection and analysis, epidemiology, health economics, behavioural and clinical research.

Services include:

- Study design and management
- Epidemiological and health economics modelling
- Data analysis and research publication



Dr Jimmy Kihara (OGH Schistosomiasis Advisor), right, supports Kenya Ministry of Health reach remote communities during Mass Drug Administration



Dr Atia Abdalla Atia (OGH Sudan Country Director) and Dr Khalid Zain (NTD Director, Federal Ministry of Health) validate National Master Plan for Neglected Tropical Diseases

HEALTH SYSTEMS

OGH applies participatory approaches to optimise the design and delivery of programmes within effective health systems. We provide structured programme and systems assessments and monitoring, evaluation and learning support, which ensures health programmes are accurately measured and policy and strategy development is evidence-based.

Services include:

- Programme design and delivery
- Programme assessment and monitoring, evaluation and learning
- Evidence-based Policy and Strategy development

HEALTH DATA

OGH supports end-to-end development and advancement of data systems and management to enable data-driven decision making. From digital data collection and analysis to real time data interpretation and visualisation, our experts collaborate with clients to ensure effective use of, and engagement with health data.

Services include:

- Data systems and management
- Data capture, analytics and interpretation
- Data applications and visualisation



4 OFFICES

LONDON, ENGLAND (Global Headquarters)
 NAIROBI, KENYA (Africa Headquarters)
 HALIFAX, CANADA
 KHARTOUM, SUDAN

Oriole Global Health operates globally and has offices in Africa, Europe, and North America. Recognising tailored solutions require local knowledge, Oriole Global Health also works with a network of international partners with complementary expertise to ensure services are optimised to their contexts.

2021/22 PROJECTS

AFRICA:
 ETHIOPIA
 KENYA
 MALAWI
 MOZAMBIQUE
 SOUTH SUDAN

SUDAN
 TANZANIA
 UGANDA
 ZAMBIA
 ZANZIBAR

ASIA:
 BANGLADESH
 INDIA
 NEPAL

EUROPE:
 SWEDEN
 UNITED KINGDOM

Ascend

Accelerating the Sustainable Control and Elimination of Neglected Tropical Diseases (Ascend) was a £100 million programme funded by the United Kingdom Foreign, Commonwealth and Development Office from 2019 to 2021. The programme supported national neglected tropical disease (NTD) programmes to implement sustainable and effective NTD strategies, with a focus on the control and elimination of five preventable NTDs: *trachoma*, *schistosomiasis*, *onchocerciasis*, *lymphatic filariasis* and *visceral leishmaniasis*.

From programme sustainability assessments and epidemiological evaluations through to implementation mentorship of mass drug administration, surgeries and quality assurance of NTD surveillance, Oriole Global Health provided systems, research, and data guidance. This was essential to pinpoint where interventions were needed and how health services should be implemented.

The Ascend programme aimed to strengthen national health systems by increasing capacity and delivering interventions that complemented national NTD programmes. In particular, Ascend supported countries across the full spectrum of prevention, detection, treatment and surveillance activities, to reduce the disease burden and to prevent disease resurgence.



340 IUs mapped/9 Countries



312,118 People Trained



40 NTD-related policies supported



1,598 Trachoma surgeries



33,641 Lymphedema morbidity cases managed



70,210,540 MDA Treatments/
21 Campaigns



Drug Procurement for
652 IU's/21 Campaigns



21,066,893 STH treatments



4,080 Hydrocele surgeries



BCC messaging to
59,401,362 people



6,887 Visceral Leishmaniasis
cases managed

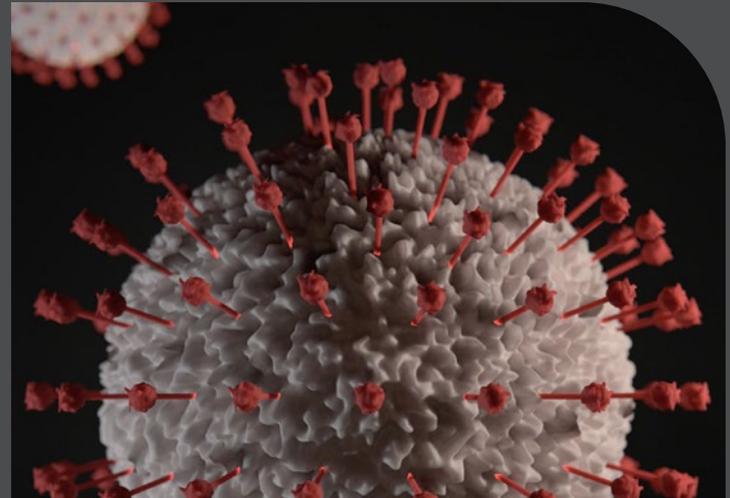
To increase the sustainability of government programmes, Oriole Global Health led training and capacity development for ministries of health personnel and other key stakeholders. This included support to Ministry of Health staff on NTD transmission, prevention and treatment; Ministry of Health training on DHIS2 data and the data visualisation platforms; and training on supply chain standard operating procedures, in collaboration with WHO and consortium partners.

COVID-19 Outbreak Response

In May 2020, the World Health Organization issued guidance recommending the temporary suspension of community-based surveys, mass treatment and active case finding, which had a significant impact on global health programmes.

Through the application of the Neglected Tropical Disease (NTD) Modelling Consortiums analytic tools and predictions, technical support was provided to partner health ministries to understand the impact of NTD programme delays on disease transmission. Utilising outputs from NTD disease specific mathematical models, Oriole Global Health was able to identify areas where an amended treatment strategy could feasibly be deployed to minimise the risk of disease resurgence, and to maintain traction against elimination targets.

This work was particularly important in Mozambique, where Oriole Global Health conducted epidemiological and economic modelling to determine optimal strategies to avoid delays to Mozambique's 2030 NTD targets. The Modelling & Analysis determined if the number of MDA rounds required to reach surveillance had changed or if progress remained on track.



Across all partner countries, Oriole Global Health supported ministries to redesign their delivery approach for NTD's to ensure service could resume safely during the pandemic. The analysis and recommendations, based on epidemiological analysis and COVID-19 transmission risk assessments, produced augmented programme designs, supporting Standard Operating Practices, and cost estimates for implementation.



OPTIMISING DEWORMING IN INDIA

In 2021, Oriole Global Health conducted Modelling and Health Economics research to estimate the most **cost-effective delivery strategies for the elimination of soil-transmitted helminths (STH) in India.**

Epidemiological modelling was conducted to assess the optimal strategy, including school-based distribution and community wide distribution of albendazole. Following this, a costing analysis was conducted, utilising best practices from the Global Health Cost Consortium Reference Case.

Results of the modelling were presented in an Interactive Web Application for Data Visualisation & Interpretation, which allowed model results to be easily accessed, providing funders and the Ministry of Health with an intuitive catalogue of programmatic outcomes according to various approaches their strategy could take. This was complemented by an interactive cost calculator for each strategy, allowing stakeholders to make evidence-based resource allocation.

ESTIMATING THE IMPACT OF REDUCTIONS IN UK AID

Oriole Global Health, in collaboration with the Neglected Tropical Disease (NTD) Modelling Consortium and World Health Organisation's Expanded Special Project for NTD's (ESPEN), conducted research to assess the epidemiological and financial implications of reductions in UK aid commitments to NTD's following Covid-19.

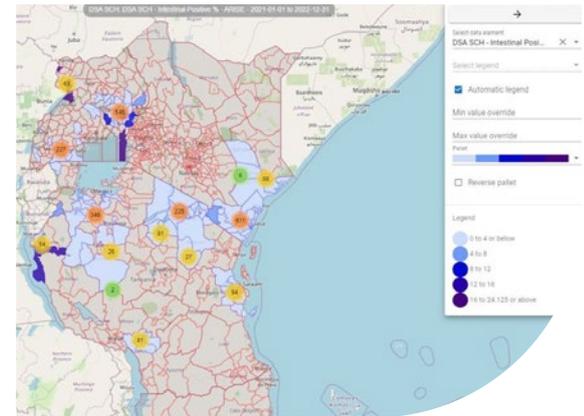
Analysis included estimating delays to reaching targets based on epidemiological simulations and costs for additional treatments required because of delays.

The research highlighted significant funding gaps that need to be filled to avoid delays to national and global targets for NTDs and provides guidance for alternate funders to compensate and combat any public health delays.

VISUALISING HEALTH INFORMATION

To assist data-driven decision making, Oriole Global Health developed two Data Visualisation applications. Built upon the R statistical language and a web-based framework, the first application provides an interactive visualisation dashboard allowing users to access and visualise World Health Organisation Neglected Tropical Disease data in real-time. The app is useful for solving any data accessibility issues for planners and Implementers. The second application, allows users to pool multivariable statistics and provide this data in visual, up-to-date, geo-spatial summaries.

The functionality and usefulness of this application was realised in Sudan through which all historical data for NTDs was aggregated and visualised in an informative and useful way. In one



DHIS2 Data System and Data Visualisation suite developed for a multi-country health programme in East Africa

instance, the application was used to advocate for better data completeness and transparency from implementing partners in country. In 2021, the Ministry of Health, Sudan, reported that the apps have significantly improved programmatic understanding and resource allocation decisions. Oriole Global Health will continue to improve these apps and offer services to other health ministries.

IMPROVING DIGITAL CAPTURE AND MANAGEMENT OF HEALTH INFORMATION

Throughout 2021 and 2022, Oriole Global Health supported health ministries with *Digital Data Capture and Data Visualisation & Interpretation for Programme Assessment & Monitoring, Evaluation and Learning (MEL)*. **Oriole Global Health provided real-time reporting and interactive data visualisation possibilities through tailored data dashboards.** Such dashboards offer District level insights as well as operational indicators, which can be driven by a range of data systems such as District Health Information System 2 (DHIS2) and are compatible with government Health Management Information Systems (HMIS).



Remote disease surveillance via network enabled data collection devices using ODK in Uganda

Oriole Global Health has also been actively involved in the development of country-specific HMIS for several health ministries. In Sudan, this included supporting the ministry of health to utilise the national DHIS2 system for patient registration. Recognising our expertise in this area, and the essential nature of digital data capture and MEL in data driven decision making for health, Oriole Global Health is actively expanding this area of work to provide health ministries with end-to-end technical assistance, that is tailored and optimised to their context.

DIGITISING CLINICAL ASSESSMENT

Oriole Global Health collaborated with chronic disease researchers at the **University of Gothenburg, Sweden**, to develop a Digital Data Collection and Management tool to collect, validate, and manage health data from clinical assessments of the elderly population. The research was aimed at developing a better understanding of the causes and outcomes of dementia and other chronic diseases in the general population.

The digital data collection tool enabled health professionals to improve the efficiency and accuracy of existing data collection processes while also enabling better retrospective electronic access to health records. Benefits of using the tool included the ability to validate data in real time, improve interview efficiency and reduce participant fatigue by employing skip logic.

STRATEGY DEVELOPMENT FOR GLOBAL NTD INVESTMENT

In 2021, Oriole Global Health assisted the **Children's Investment Fund Foundation (CIFF)** to develop its global Neglected Tropical Disease Strategy. Oriole Global Health consulted a range of international experts, including programme staff and policy makers, through a series of Policy & Strategy Development workshops to ensure synergies in global NTD targets and approaches in CIFF funded projects for its selected countries.

Oriole Global Health also analysed existing interventions and health care diagnostics to ensure CIFF investments are cost-effective and appropriate to the communities they are designed to benefit. The project delivered an investment strategy for integrated NTD control and elimination.



Finger inking as part of the Lymphatic Filariasis Mass Drug Administration, Dar Es Salaam, Tanzania



ARISE



ARISE-NTDS

In 2021, the Accelerate Resilient, Innovative, and Sustainable Elimination of NTDs (ARISE-NTDs) programme, funded by the Children's Investment Fund Foundation and managed by Crown Agents, was established to support governments to control and eliminate schistosomiasis, soil transmitted helminths and lymphatic filariasis in Kenya, Mozambique, Tanzania and Uganda.

Oriole Global Health is providing overall delivery coordination, quality assurance, and MEL. In addition, Oriole Global Health has directed efforts with the health ministries of Kenya, Mozambique, and Uganda to receive *Training and Capacity Development* to combat lymphatic filariasis and schistosomiasis.

To support Policy & Strategy Development, Oriole Global Health created an Interactive Web Application used for Digital Data Collection and Data Visualisation and Interpretation to understand the current epidemiology of the region and the supply chain management and programme results.

Developing, coding, and designing Digital Data Capture tools, Oriole Global Health has improved MDA targeting, delivery and rates of coverage. Through the prioritization of sustainability and country leadership, and through Training and Capacity Development, Oriole Global Health has involved health ministries to create their own data capture tools to realise data-driven decision making. Alongside digital data support, Oriole Global Health provided technical assistance with in-field implementation, maintaining key success drivers of advocating integration, promoting coordination with local and global stakeholders, and delivering sustainable approaches to training and capacity management.

VISCERAL LEISHMANIASIS PROGRAMMES IN AFRICA AND ASIA

Visceral Leishmaniasis (VL) is a life threatening disease caused by the leishmania parasite transmitted by sandflies. 600 million people remain at risk globally, with 50,000 - 90,000 new cases reported each year. 90% of cases occur in only 10 countries. Oriole Global Health supports the Ministries of Health in Sudan, Uganda, Bangladesh and Nepal to combat this disease.

Current funding provided by The END Fund supports activities in East Africa, whilst funding from Bill and Melinda Gates Foundation supports work in Asia.

SUDAN AND UGANDA

In East Africa, VL affects the hardest to reach and most marginalised populations, including those in post-conflict areas and refugee settlements.

To ensure no one is left behind, Oriole Global Health provides technical expertise in support of the health ministries of Uganda and Sudan to improve Training & Capacity Building in local health centres and ensure equitable access to diagnostics and treatment.

In Sudan, Oriole Global Health's in-country specialists introduced a mobile mentoring scheme which provides on-site training to health workers spread across the 44 treatment centres. The mobile mentorship scheme has proved so successful that it has now been rolled out in Uganda and has already dramatically improved active case searching leading to more patients being diagnosed and accessing treatment.

Oriole Global Health is also supporting health ministries in both countries to manage and handle data more efficiently and provide capacity building support for the effective use of DHIS2.

BANGLADESH AND NEPAL

Both Nepal and Bangladesh have made huge strides towards reaching elimination over the past decade. Bangladesh has achieved elimination of VL as a public health problem (less than 1 case per 10,000 population) and is on track to have this validated by the end of 2022. The next goal would be to reach transmission breaking elimination by 2025 which would be a global first.

The Government of Nepal has set a target for elimination of VL in Nepal by 2024. However, new foci of infection have recently appeared in previously non-endemic areas. This includes 23 districts in the hilly west of the country and one in the East. Oriole Global Health is supporting the Ministry of Health to develop operational research proposals to fully investigate these outbreaks and whether these could be the result of climate change or other factors and to determine how these new outbreaks could affect progress towards elimination.

LOOKING FORWARD

2021/2022 saw Oriole Global Health increasingly recognised for its expertise across health systems, health research and health data, which is reflected in its growing client base, expanding portfolio across diseases, and new offices established in Canada and Sudan.

Looking forward to 2022/2023, Oriole Global Health will continue to leverage its expertise across its key pillars of work to *strengthen existing partnerships* and *forge new partnerships* across sectors, in pursuit of our vision, where future populations have access to sufficient healthcare systems free from the burden of diseases.

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