Progress Report

April 2014 – March 2015

Integrated Control of Schistosomiasis and Intestinal Helminths in sub-Saharan Africa (ICOSA)

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Submitted by
The Schistosomiasis Control Initiative
in collaboration with
Centre for Neglected Tropical Diseases, Liverpool School of Tropical Medicine
Liverpool Associates in Tropical Health
Crown Agents

CONTENTS

ABBREVIATIONS and ACRONYMS

ADP	Accenture Development Partnerships
APOC	African Programme for Onchocerciasis Control
CDI	Cote D'Ivoire
CDTI	Community-directed treatment with ivermectin
CHAI	Clinton Health Access Initiative
CNTD	Centre for Neglected Tropical Diseases
DFID	Department for International Development
DRC	Democratic Republic of Congo
epg	Eggs per gram
FY	Financial year
GSA	Global Schistosomiasis Alliance
ICOSA	Integrated Control of Schistosomiasis and Intestinal Helminths
LSTM	Liverpool School of Tropical Medicine
M&E	Monitoring and Evaluation
MDA	Mass Drug Administration
MDG	Millennium Development Goal
MISAU	Ministério da Saúde (Ministry of Health)
MoH	Ministry of Health
NTD	Neglected Tropical Diseases
PZQ	Praziquantel
PCT	Preventive chemotherapy
SAC	School-aged children
SCH	Schistosomiasis
SCI	Schistosomiasis Control Initiative
SCORE	Schistosomiasis Consortium for Operational Research
STH	Soil-transmitted Helminths (intestinal helminths)
TIPAC	Tool for Integrated Planning And Costing
VFM	Value for money
WHO	World Health Organization
ZEST	Zanzibar Elimination of Schistosomiasis Transmission

Introduction

In October 2010, DFID provided £25 million to deliver treatments for schistosomiasis (SCH) and intestinal helminths (STH) in 8 countries in sub-Saharan Africa (Phase I). Of the £25 million, £14.5 million was allocated to Crown Agents largely for the procurement of praziquantel (PZQ), with £10.5 million provided to the Schistosomiasis Control Initiative (SCI) to provide technical support to the national control programmes within the countries for the delivery of treatment through preventative chemotherapy (PCT). Recipient countries are Cote d'Ivoire, Liberia and Malawi (Group One); Mozambique, Tanzania and Zambia (Group Two); and Niger, Uganda and Zanzibar (Group Three). The programmes in Liberia, Mozambique and Zambia receive management support through the Centre for Neglected Tropical Diseases (CNTD), Liverpool School of Tropical Medicine (LSTM) under a sub-contract with Imperial College.

In June 2014, DFID increased the ICOSA project by an additional £25 million (Phase II) to expand the scope of the project within the currently supported countries and to include Ethiopia and the Democratic Republic of Congo (DRC) as recipient countries. This expansion has allowed the initiation of PCT for SCH and STH in both countries, neither of which have previously embarked on national control. As such, both Ethiopia and DRC fall into Group One. Of the £25 million, SCI received an award of £16.6 million with the remaining allocated to Crown Agents for any necessary procurement. The project additionally expects to leverage the increased donation of PZQ by Merck Serono, available to countries by application through the World Health Organization (WHO).

ICOSA commenced in October 2010 and has now been extended with Phase II until December 2018. The project is entering Financial Year 6 (FY6; 1st April 2015 – 31st March 2016) having completed 54 months of operation (out of 99). This report details activities during FY51st April 2014 – 31st March 2015 and includes progress to date on the project as a whole.

Progress against Log Frame

IMPACT

The **impact** of the project will be to contribute to the achievement of the human-development-related Millennium Development Goals (MDG), in particular MDG6, through the control and treatment of schistosomiasis (SCH) and soil-transmitted helminths (STH). There are two indicators at impact level.

Impact indicator 1: Mean intensity of infection

Impact indicator 1 relates to the health impact of the project by measuring the reduction of intensity of infection over time. Intensity of schistosomiasis infection is an accepted proxy for disease morbidity[1]; therefore regular collection of this data gives a direct measurement of

[1] Van der Werf et al (2003) Quantification of clinical morbidity associated with schistosome infection in sub-Saharan Africa. Acta Tropica 86:125-139

the effects of treatment on the occurrence of infection and an indirect measurement of the effectiveness of treatment in improving health status[2]. Intensity is measured as the number of eggs per gram of faeces (epg) for *Schistosoma mansoni* and as the number of eggs per 10 ml of urine (eggs/10ml) for *S. haematobium*.

Intensity data are collected through longitudinal parasitological surveys from a sample of school-aged children (SAC) in sentinel schools which are successively followed-up pre- (at baseline) and post treatment. The establishment of sentinel schools and subsequent baseline data collection has been completed in all Phase I ICOSA-supported countries.

As the project scales into Phase II, the survey methodology has been reviewed to ensure that quality data is collected from SAC by optimising the parasitological surveys within schools and maintaining statistical power for analysis. The decision has been made to move from a longitudinal cohort to a cross-sectional design thus, rather than the same children being surveyed at each assessment, a cross-section of SAC of the same age group and from the same sentinel schools will now be recruited. Contributing factors to this decision include difficulty in re-recruiting the same children each year e.g. as a result of school drop-out[3] and also that individual data is not required to demonstrate impact on prevalence and intensity at community level.

The log frame milestone by end 2014 expected that for group one and two countries, infection intensity should have reduced by 50-65% for *S. mansoni* and by 65-80% for *S. haematobium* where 1 round of PCT has taken place.

[2] Helminth Control in School-Aged Children, 2nd Edition, World Health Organization ISBN9789241548267.
[3] High endemic areas of schistosomiasis are often associated with large bodies of water. Fishing is often the primary source of income and families are known to move along lake shores in accordance with fish supply. The areas are often similarly prone to flooding, resulting in temporary community displacement.

IMPACT Indicator	Achieved by March 2014	Milestone by end 2014	Achieved by March 2015
1. Mean intensity of infection in treated areas	<u>Baseline</u> **Cote d'Ivoire** (2013): Sm = 46.01 epg Sh = 5.98 e/10ml	*<u>Baseline</u>* conducted in all countries ready to commence PCT *<u>Post 1 round of PCT</u>* *S. mansoni* (Sm): 50-65% reduction from baseline *S. haematobium* (Sh): 65-80% reduction from baseline	<u>Post 1 round of PCT</u> **Cote d'Ivoire**: Planned for May/Nov 2015[1]
	Liberia (2012): Sm = 16.32 epg Sh = 42.36 eggs/10ml		**Liberia** (2014): Data are being entered
	Malawi (2012): Sm = 1.89 epg Sh = 4.30 eggs/10ml		**Malawi** (2014): Sm = 0.10 epg *reduction from baseline 94.6%* Sh = 1.55 eggs/10ml *reduction from baseline 64.0%* <u>Post 2 rounds of PCT</u> **Malawi** (2015): Data are being entered
	Mozambique (2012): Data are being analysed in-country		**Mozambique** (2013/4): Data are being analysed in-country
	Niger (2011): Sm = n/a Sh = 3.4 eggs/10ml		**Niger** (2012): Sh = 1.4 eggs/10ml *reduction from baseline 58.8%* **Niger** (2013): Data are being analysed
	Tanzania (2012): Sm = 109 epg Sh = 18 eggs/10ml		**Tanzania** (2013): Data to be analysed in-country
	Uganda (2013): Sm = 2.96 epg Sh = n/a		**Uganda**: Planned for Oct 2015
	Zambia (2013): Sm = 2.36 epg Sh = 9.20 eggs/10ml		**Zambia**: Planned for July 2015
			DRC (2014) Data are being entered
			Ethiopia (2015) Data are being entered

During this reporting period the Phase II countries of DRC and Ethiopia have collected baseline data. Both countries are incrementally rolling out mass PCT campaigns, thus baseline sentinel schools have intentionally been split between the phases. Approximately 60% of data

[1] The month in which MDA, and thus the 1st follow-up in sentinel schools is dependent on when the national elections take place in Cote d'Ivoire in 2015

collection has occurred with the remaining baseline sentinel site data to be collected during the next PCT campaigns in October (Ethiopia) and November (DRC). Data entry and cleaning for both countries is underway.

Under the supervision of the Ministério da Saúde (MISAU) NTD Programme Manager, data collection at school sentinel sites has been ongoing in Mozambique, with baseline, 1st follow-up and 2nd follow-up data collected. The latter data collection has taken place during this reporting period. Data entry has taken place in-country, with data cleaning and analysis currently being undertaken. Data access is strictly limited in Mozambique and statistical support for analysis has been agreed with MISAU, however, all previous attempts to organise have been cancelled at the last minute by our partners at MISAU either due to poor health, lack of availability and last minute travel.

Within the current reporting period, the 2nd follow-up data collection surveys from established sentinel schools has been undertaken in Malawi. Data entry and cleaning is being conducted.

Final results for each of these countries, and outstanding data analysis in Tanzania, will be included in the next ICOSA report.

Impact Indicator 2: Validated Treatment Coverage

The project is making an impact by reducing prevalence and intensity of infection and preventing progression of morbidity in infected individuals who are treated. Impact of the project is, therefore, also determined by the number of individuals receiving the tablets for SCH and STH out of the eligible population, i.e. the national coverage. For ICOSA, the target coverage is 75% for both PZQ and ALB, in line with WHO guidelines (WHO, 2011). If high drug coverage is not attained, untreated individuals could potentially act as reservoirs of transmission, hindering control and elimination efforts. Each country collects and submits reported drug coverage, calculated using the number of doses distributed during a round of PCT recorded in treatment registers for the numerator, and population figures (often obtained from census population figures) as the denominator. This routine reported coverage can be unreliable due to the overestimation and at times underestimation, of the numbers of individuals treated and also because of out of date and inconsistent projections of eligible populations.

To validate the accuracy of reported PCT coverage rates, ICOSA oversees independent drug coverage surveys, particularly at the beginning of a programme, to ensure that prompt corrective action is taken where sub-optimal coverage is found. ICOSA has a template protocol for validating coverage which is reviewed and updated on an ongoing basis as experience in the area grows and with the increasing publications on optimum methodologies for capturing validated PCT coverage data. Current methodology is a household-based survey, which uses a stratified 2-stage cluster sampling design. In addition to validation, these coverage surveys also provide a unique opportunity to assess other issues, including awareness of NTDs and PCT, PCT delivery strategies, biases in treatment coverage for example by age and gender and examination of possible reasons for poor coverage or adherence. In areas where reported coverage is low, additional methods i.e. Key Informant Interviews and Focus Group Discussion are recommended to assess the causes of low coverage (WHO, 2005; WHO, 2010).

IMPACT Indicator	Achieved by March 2014	Milestone by end 2014	Achieved by March 2015
2. **Validated treatment coverage in school-aged children** (5-14 years) (disaggregated by gender) by country	Post 1 round PCT **Zanzibar*** (2012): 75% Post 2 rounds PCT **Zanzibar*** (June 2013): 85.1% Post 3 rounds PCT **Zanzibar*** (Nov 2013): 87.3%	Post 2 rounds PCT: at least 70%	Post 5 rounds PCT **Zanzibar*** (Aug 2014) 72% Post 6 rounds PCT: **Zanzibar** (March 2015) Data being cleaned for analysis
	Post 1 round PCT **Malawi** (Oct 2012): 75.9% female; 79.9% male		Post 2 rounds PCT **Malawi** (Sept 2014): 78.3% female; 78.7% male
	Post 1 round PCT **Cote d'Ivoire** (Feb 2014): 80.6% female; 79.0% male		
	Post 1 round PCT **Uganda** (Feb 2014): 35.7% female; 36.2% male		

*Government of Zanzibar's own post-MDA coverage survey (i.e. not independent). N.B. Zanzibar are conducting biannual treatment for schistosomiasis.

As reported in the annual review and updated Log-Frame in August 2014, coverage in Uganda was low as a perceived consequence of being a mature programme, working in low endemic areas and the subsequent lack of symptomatic morbidity seen in communities. Different methods to increase community sensitization, mobilisation and thus treatment uptake will be piloted during the next MDA campaign in November 2015.

The Malawi coverage figures highlight that for SAC treatment coverage is being maintained above both the WHO recommendations and the ICOSA targets for both genders. This is an encouraging finding and highlights that the national programme is continuing to reach those individuals most at risk of infection.

The Zanzibar survey data, collected in March 2015, was captured in real time using mobile phone technology and the dataset is already being cleaned for analysis. This was the first independent coverage survey for schistosomiasis to be completed across the two islands and will disaggregate the data by gender and age. In addition, this validated coverage survey will identify the coverage achieved in SAC through two different approaches on each island: Unguja implemented community-wide distribution through community drug distributors and Pemba used a combination of school-based treatment and community based treatment using static health posts. These two types of intervention were piloted to determine which achieves increased coverage in non-enrolled SAC.

Of the treatment campaigns which took place during the last quarter of FY5, coverage surveys will be implemented in Zambia, Niger and Ethiopia using standard methodology and in Mozambique using a Lot Quality Assurance Sampling technique conducted by CNTD.

OUTCOME

The **outcome** of the project will be to contribute to the WHO global strategic plan for SCH (2012-2020) by providing a total of 203.5 million treatments by end 2018. The anticipated schedule for delivering these treatments through mass drug administration (MDA) is outlined in Annex 1.

By end March 2015, the project has delivered a total of 44.47 million treatments, in excess of the end 2014 log frame target. Additional treatment numbers are still pending for Niger and Tanzania, with MDA occurring in April 2015 in Mozambique (target population 3.3 million) and Ethiopia (target population 3.4 million), therefore the contractual target for June 2015 is expected to be met.

OUTCOME Indicator	Milestone by end 2014	Achieved by end March 2015	Contract target by June 2015
Number of treatments delivered, in millions (cumulative)	43.98 million	44.47	45.10

Treatment had been delivered in all existing ICOSA-supported countries prior to the expansion of Phase II of the project. Although both DRC and Ethiopia were only officially included after the first quarter of FY5, significant preparatory activities were already underway, supported by SCI, which allowed DRC to embark on MDA within the same financial year, with Ethiopia scheduled to deliver treatments in the first month of FY6. Total treatments by country are outlined in Table 1.

Table 1: Total number of treatments delivered by country.

COUNTRY	FINANCIAL YEAR					TOTAL PROJECT
	FY1	FY2	FY3	FY4	FY5	
	Oct 10 - Mar 11	*Apr 11- Mar 12*	*Apr 12 - Mar 13*	*Apr 13 - Mar 14*	*Apr 14 - Mar 15*	*Oct 10 -Mar 15*
Cote d'Ivoire	0	0	649,859	853,708	3,072,078	4,575,645
Liberia	0	17,400	0	625,632	0	643,032
Malawi	0	2,071,817	2,037,487	0	4,305,956	8,415,260
Tanzania	0	0	122,996	2,062,685	2,100,000*	4,285,681
Mozambique	0	2,391,871	1,819,000	5,816,716	4,257,365	14,284,952
Zambia	0	19,800	0	36,929	988,023	1,044,752
Niger	0	482,028	272,994	1,338,453	1,215,190*	3,308,665
Uganda	0	308,305	0	646,246	23,017	977,568
Zanzibar	0	945,282	1,059,318	1,694,264	1,610,281	5,309,145
DRC	0	0	0	0	1,630,700	1,630,700
Ethiopia	0	0	0	0	0	0

Total	***0***	***6,236,503***	***5,961,654***	***13,074,633***	***19,202,610***	***44,475,400***
Cumulative Total	**0**	**6,236,503**	**12,198,157**	**25,272,790**	**44,475,400**	

*Additional treatment numbers pending

Challenges

One of the major challenges to successful treatment delivery is the additional burden of unpredictable disease outbreaks placed on already under-sourced health systems within the countries. During FY5, this has been particularly evident in Liberia, where an Ebola epidemic placed unprecedented demands on the Ministry of Health. The situation remained fluid in the first half of FY5 with the targeted 0.7 million treatments still scheduled for delivery in October 2014, until the official suspension of all NTD activities in September. Although the situation in Liberia continues to improve and the suspension has been recently lifted, there is still a formal assessment required of the situation at the community level to determine how this level has been affected in light of restarting MDA. This is pending for FY6.

On a smaller scale, treatment results are still incomplete for Niger, which undertook MDA during January and February 2015. An ongoing meningitis epidemic has affected the reporting of treatment numbers from the health facility level with 4 (out of 7) districts still to submit treatment numbers due the demands placed on the health facilities during this outbreak.

OUTPUTS

The five project **outputs** are:

1. 100% at-risk areas mapped in all supported sub-Saharan African countries
2. Over 500 million tablets delivered to treat infections
3. National programmes implementing mass drug administration (MDA) in the most effective ways as a result of monitoring and evaluation activities
4. Strategies identified to promote elimination of SCH in low endemic settings
5. Reduced costs of treatment as a result of efficient implementation

Output 1: Priority areas identified through mapping of infected populations (Group 1&2 countries)

Output Indicator	Milestone by end 2014	Achieved by March 2015
1.1 Number of country* specific mapping protocols available	8 available (including Phase II countries)	8 available (Phase II country protocols not developed through ICOSA)
1.2 Target areas mapped for disease by country	100% all countries	100% Malawi
		66% Liberia (10 complete out of 15 counties)
		100% Cote d'Ivoire

		100% Zambia
		100% Tanzania
		100% Mozambique
		100% Ethiopia
		100% DRC†

*There are 8 countries: Group 1 countries are Malawi, Liberia, Cote d'Ivoire (Phase I) and Ethiopia, DRC (Phase II); Group 2 countries are Tanzania, Mozambique, Zambia (Phase I)

†All provinces mapped but a number of health zones within were not included due to security issues at the time of surveys

The results of mapping continue to be used to define the treatment strategy within each of the target implementation units and as the basis for selection of sentinel evaluation sites prior to MDA. Mapping was complete in Tanzania and Mozambique prior to ICOSA and has been completed in Cote D'Ivoire, Malawi and Zambia with ICOSA support. Ethiopia (with SCI support) and DRC (with CNTD support) have also completed mapping out with the ICOSA project, although a few health zones remain within DRC as a result of political instability.

Challenges

The remaining 5 counties of Liberia which have not yet been mapped were due to be completed during FY5, but due to the Ebola outbreak this has not happened. It is not likely that clearance will be granted to complete mapping in the foreseeable future due to the reliance on collecting bodily fluid (stool and urine) samples, a transmission route for the Ebola virus. Although WHO advise that traces of virus are still present in body fluid (semen) for up to 3 months after recovery, recent findings suggest that the timeframe may be longer[2].

Opportunity

In late 2013, the Bill and Melinda Gates Foundation announced a $15 million grant for integrated mapping for NTDs in the African Region. Countries within the region have been able to access funding from WHO's African Regional Office (AFRO) to scale up and/or complete the mapping of NTDs. This has alleviated the requirement of ICOSA to support mapping for SCH and aside from the completion of the 5 counties within Liberia, it is not anticipated that further mapping will be required through this project.

Publication of SCI mapping approach is undergoing the final revision by the co-authors and will then be submitted to PLoS NTD for peer review.

[2] During April 2015, the WHO confirmed the positive trace of Ebola virus in a semen sample from an individual declared disease free via a negative blood test six months previously.

Output 2: Drugs procured and delivered

Output Indicator	Milestone by end 2014	Achieved by March 2015
2.1 No of tablets delivered to countries	143 million (including Phase I and II)	181.2 million *of which:* 147.5 million (CA procured Phase I only) 33.7 million donated by WHO
2.2 No of countries implementing MDA according to their National Strategic Plans	8 countries	9 countries
2.3 DFID will monitor, and contribute to the effective management of the market for PZQ	Develop scope of work for report	Report conducted

Tablet delivery. By the end of March 2015, over 181 million tablets of PZQ had been delivered to countries since the start of ICOSA. 147 million PZQ tablets have been procured and delivered by Crown Agents (CA) to all Phase I ICOSA supported countries, with the exception of Zanzibar who receive all their PZQ from the Merck Praziquantel Donation Programme through WHO. DRC and Ethiopia have additionally been recipients of PZQ from WHO and have not yet been included in the PZQ procurement rounds for ICOSA. The delivery of drugs across each of the countries is indicated in Table 2.

Table 2: Total number of tablets procured/donated and delivered by March 2015 by country.

Country	Total number of PZQ tablets PROCURED and delivered by March 2015	Total number of PZQ tablets DONATED* and delivered by March 2015
Cote d'Ivoire	19,211,454	0
Liberia	4,875,500	0
Malawi	35,975,000	2,502,000
Mozambique	48,200,000	0
Niger	7,926,500	0
Uganda	4,110,000	0
Zambia	11,419,500	0
Tanzania	15,750,000	0
Zanzibar	0	14,292,000
DRC	0	4,005,000
Ethiopia	0	12,906,000
TOTAL	**147,467,954**	**33,705,000**

*Merck PZQ donated through WHO only

All tablets ordered through CA during FY5 were delivered with the exception of those procured for Liberia, which were successfully diverted to Zambia in light of the emerging Ebola epidemic.

Countries implementing MDA. By end March 2015, all countries with the exception of Ethiopia, had undertaken at least one round of MDA for SCH and STH, either as a vertical programme or as part of an integrated NTD programme depending on the national strategic plan for each country. The MDA in Ethiopia is scheduled to commence in early April 2015. Liberia has necessarily been placed on hold during FY5 but is expected to restart NTD programme activities during FY6 pending the results of a collaborative multi-partner readiness assessment conducted with the Ministry of Health.

PZQ market management. The Clinton Health Access Initiative (CHAI) were contracted to examine the effect on the market for PZQ by the Merck donation scale up to 105 million tablets in 2015 and 250 million tablets annually thereafter. SCI staff assisted the team by providing information on country capacity, drug needs and procurement plans. CHAI concluded that the expected procurement will drop to the range of 10-50 million tablets during 2016, and not more than 110 million tablets thereafter with in country capacity to deliver the drug being the limiting factor. CHAI believe that the potential market can only sustain one or two suppliers and that the purchasers (CA, World Bank, World Vision and USAID) will each scale back due to the increased Merck donation. However, if adults are to be included in addition to SAC as targets for treatment, the demand could be upwards of 100 million tablets per year, but funding to purchase these tablets and more importantly to deliver them remains a gap. Largely unknown is the ability of the high priority countries in the African region, namely Nigeria, Ethiopia, DRC and Mozambique, to increase to national scale which would place additional demand for more PZQ, although lack of funding would become the limiting factor in SCH control. The CHAI findings have been discussed with DFID and SCI and the report is now being finalised.

Challenges

<u>Procurement:</u>

The **Ebola outbreak** in Liberia escalated after contracts had been placed for a number of items scheduled for use during FY5.

- As a result, the challenge to ICOSA was to ensure that a quick needs assessment was conducted to determine the most appropriate alternative destination, with Crown Agents working closely with suppliers to ensure that goods were redirected.
- Aside from the direct effects of the epidemic within Liberia, indirect effects were also observed within the region. The unavailability and temporary suspension of flights within West Africa led to minor delays in the delivery of goods to Cote D'Ivoire, although there was no impact on the programme.

In order to be better prepared for unforeseen Force Majeure events (such as epidemics, political unrest and strikes), Crown Agents are closely monitoring potential risks in destination countries. In addition, the freight forwarding team at CA will alert for any potential disruptions at the earliest opportunities.

Destination clearance is proving challenging in the newly included countries of DRC and Ethiopia. (This delay refers to equipment and supplies not to praziquantel, which is all WHO/Merck donated in these countries so far)

- Within DRC, consignments have been held at the border for several months due to the bureaucracy in the customs clearance process by the Government Authority, despite the involvement of WHO as a clearing agent, or due to political unrest in the country.
- In Ethiopia, there have been similar lengthy delays in destination clearance in spite of utilizing the British Embassy in the country.

CA are undertaking mitigation procedures in DRC, including investigating the possibility of utilising the 'diplomatic cargo' clearance route via the British Embassy/ DFID in Kinshasa. As this is already the preferred option in Ethiopia, CA will endeavour to improve communication and more closely monitor the progress of clearance activities.

PZQ delivery delay became an issue for the first time for the project during FY5. Crown Agents had to enact the contractual penalty clause with Microlabs, who were significantly delayed (10 weeks) in completing an order of PZQ for Cote D'Ivoire. This is particularly significant for the project given that Microlabs has been the primary supplier of PZQ for ICOSA to date and therefore it cannot risk supplier complacency going forward given the increased procurement necessary for FY6s treatment delivery schedule. Crown Agents will continue to deduct the penalty fee for liquidated damage for delay from supplier's invoices when timescales slip.

PZQ Coordination:

The WHO leads the allocations of Merck-donated PZQ to recipient countries through a formal application process, followed by a review meeting of the Regional Programme Review Group (RPRG) which was initially established for other NTD medications but is now expanded to include PZQ. The RPRG review was scheduled to take place in October 2014 following an August submission date, but was delayed until February 2015 thus also delaying the final drug allocations for each country. (SCI was represented at the RPRG)

It is essential that the results of the WHO RPRG allocations are known to ensure no duplication of orders by ICOSA. Previously this was discussed in the forum of the PZQ Coordination Group facilitated by WHO. However, during FY5, no such meetings took place. In light of the excellent working relationship between SCI, Merck and WHO, all ICOSA PZQ procurement data has been shared in the interim, with WHO/Merck data reciprocally shared thus ensuring coordination out with the meeting, although these are expected to recommence during FY6.

Going forward, a major challenge will be to ensure that appropriate levels of PZQ are allocated to ICOSA countries, which has not been the case to date (with the exception of Zanzibar, DRC and Ethiopia). 2015 is likely to be the last year whereby demands of PZQ are necessary on the project as the WHO Merck donation has not yet reached scale - 100 million tablets available for 2015 will increase to 250 million in 2016 provided Merck has the capacity to meet their commitment. ICOSA will therefore provide any assistance necessary to each country in the submission of their joint request forms during FY6 and continue closely collaborating with WHO and Merck, in addition to other partners such as World Vision who have also emerged as significant PZQ donors.

Opportunities

ICOSA has previously reported on leveraging opportunities (such as co-funding, operational research, and integration of activities) within the framework of the project, where feasible, in each country.

During the reporting period, SCI and CNTD have been exploring opportunities with other DFID NTD implementing partners to coordinate approaches to implementation and will be taking that forward in the broader context of that scope of work.

At the country level, SCI and CNTD have formalised working relationships with Sightsavers in DRC and Zambia to work through their existing channels within the countries. Additionally outside the formal relationships, joint planning and budgeting has occurred within Tanzania, Zanzibar, DRC and Cote D'Ivoire in the context of their integrated NTD programmes. It is expected that more opportunities will arise as programmes scale into areas of overlapping geographical implementation.

Output 3: National programmes using monitoring and evaluation results to refine strategies

Output Indicator	Achieved by March 2014	Milestone by end 2014	Achieved by March 2015
3.1 **Percentage of targeted districts submitting reports 90 days after MDA**	Phase II Indicator	50%	**Cote d'Ivoire** (2014): 100% **Liberia** (2014): 100% **Malawi** (2014): 50% **Mozambique** (2014): (100%) **Niger** (2014/5):43% **Tanzania** (2014): 70% **Uganda** (2014): 80% **Zambia** (2014): pending **DRC** (2014): est. 30%
3.2 **Validated coverage of children not at school by gender**	**Malawi** (2012): Females 14.76%; Males 15.49%	At least 50% in 4 countries	**Malawi** (2014): Females 42.1% Males 44.3% **Uganda** (2014) Females 5.5% Males 1.0% **Zanzibar** (2015) Data are being cleaned
3.3 **Percentage of people with heavy infections in treated areas by country** (Group 1 and 2 countries only)	<u>Baseline</u> **Cote d'Ivoire** (2013): Sh = 1.9% Sm = 2.9%	<u>Post 1 round of PCT</u>: Decline in percentage by 60% (*S.h*) and 40% (*S.m.*) <u>Baseline</u> conducted in all Phase II countries	<u>Post 1 round of PCT</u> **Cote d'Ivoire**: Planned for May/Nov 2015
	Liberia (2012): Sh = 9.3%, Sm = 0.2%		**Liberia** (2014) Data are being entered
	Malawi (2012): Sh = 1.0%, Sm = 0.1%		**Malawi** (2014): Sh = 0%, Sm = 0%
	Mozambique (2012):		**Mozambique** (2013/4): Data are being analysed in-country
	Tanzania (2013)		**Tanzania** (2014): Data to be analysed in-country
	Zambia (2013): Sh = 2.0%, Sm = 0.1%		**Zambia**: Planned for July 2015
			<u>Baseline</u> **DRC** (2014) Data are being entered
			Ethiopia (2015) Data are being entered

Reporting within 90 days: The majority of implementing units are reporting treatment figures to the national level within a 90 day period. Reporting in Niger has improved from 16% to 43% following the MOH led meetings in each district, however, further progress will be discussed when the Niger team visit SCI in London in May 2015. In Malawi, piloted district reporting templates and processes have undergone further revision following feedback from the districts and three regional meetings to review the 2015 MDA will also include introducing the newly revised district reporting templates. It is hoped that these processes will support timelier reporting of treatment figures after future MDAs. The DRC has just completed its first MDA for SCH and STH. Due to using the Community-Directed Treatment (CDT) approach, which is historically used for onchocerciasis programmes, treatment has been ongoing in the targeted areas since December 2014 as communities roll out the distribution of drugs as and when they desire. As a consequence, in the majority of areas, reporting has not occurred within a 90 day time period. The CDT approach for delivering mass treatment for integrated NTDs is currently under review by the MoH in the DRC.

Validated coverage of children not at school: As mentioned earlier in this report, the Uganda MoH with the support of SCI will pilot strategies to increase treatment uptake in SAC including methods for reaching the non-enrolled SAC through community interventions. The planned in-depth interviews with school teachers and community drug distributors and focus group discussions with families and out of school children to determine reasons for low treatment uptake in the previous MDA were postponed due to reassessment mapping being prioritised within the FY5 budget.

In Malawi, the strengthened national Information, Education and Communication (IEC) campaigns which included a collaboration with Save the Children and radio jingles have had a positive impact on reaching the non-enrolled SAC who have also been targeted in some areas through community treatments. There will be continued efforts to increase treatment coverage in this subset of the population.

In Cote d'Ivoire the preliminary results of the in-depth interviews with the 12 Community Health Workers which were conducted in November 2014, highlight:

- there are queries over the safety and reasons behind the government giving out free medication
- it is perceived that there is not enough human resource for drug delivery
- there is a lack of incentive for NTD campaigns in comparison to other campaigns e.g. polio
- the time frame for treatment is limited when there are too few CHWs to serve the communities they need to treat
- inadequate understanding of what is required and lack of incentive to perform social mobilization to encourage treatment seeking behaviour
- there is an absence of direct observation of treatments i.e. on occasions CHWs gave the tablets to the parents to give to the children at a later time

The full dataset is to be analysed by an Imperial College London MSc student, supervised by SCI, in June/July 2015. The forward strategy of how to address these programme issues are under discussion with the national team at the Cote D'Ivoire MoH.

Percentage of people with heavy infections: As per previous explanation, the only dataset which has been entered, cleaned an analysed to determine the change in prevalence of heavy infections has been Malawi. There were no children in the sentinel schools who had a prevalence of heavy infection for either schistosome species. All other data which has been collected in Liberia, Mozambique and Tanzania will be analysed and ready for the next DFID report.

Challenges

There are some challenges in working with the partner countries whose mandate it is to have all data collected in-country to be analysed within country. There are, understandably, regulations in data ownership which we must work around and come to a compromise with our in-country partners. We continue to build capacity in all country teams, working on the ICOSA project, on double-data entry and data management such as cleaning of datasets. In the majority of countries the datasets are then sent to SCI for final cleaning and analysis, however with some – Mozambique and Tanzania in particular – these stages must be carried out in country. Previous attempts to organise building this statistical capacity have frequently succumbed to scheduling problems and this analysis of these data have been quite seriously delayed. We have statistical support travelling to Mozambique this month and hope that all three years of data will be analysed at last. The Tanzanian MoH have now requested SCI to provide them with more epidemiological support, for studies they are designing around optimising SCH control, and for statistical support to analyse the two existing datasets for the ICOSA supported SCH treatments.

Opportunities

SCI have provided a significant amount of training through our African Capacity Building Adviser, Dr Narcis Kabatereine and his small team. They have carried out training whole teams of Ministry of Health staff and technicians in Ethiopia and the DRC in parasitological diagnostic techniques, study design and data collection according to SCI protocols. In addition they have supervised and carried out quality assessment for mapping surveys and impact surveys in both countries. The capacity to conduct follow-up surveys in both these countries has now been created.

There has been capacity building carried out by SCI staff in Malawi and Zanzibar through the training of enumerators and team supervisors to conduct validated coverage surveys. In both countries the staff have been taught how to use smart phones to electronically capture the data in real time. Going forward, it is hoped that we can build a network of specialists/technicians within the African region that, in a south to south initiative, can carry out training and supervise surveys.

Output 4: Development of strategies for the elimination of SCH as a public health problem in Zanzibar, Niger and Uganda

Following the recognition of the long term health impact of disease elimination outlined in the World Health Assembly Resolution 66.12 in May 2013 (reference http://www.who.int/neglected_diseases/mediacentre/WHA_66.12_Eng.pdf) ICOSA is supporting the development of elimination strategies in Zanzibar, Uganda and Niger which have been undertaking MDA for a number of years.

<table>
<tr><th>Output Indicator</th><th>Achieved by March 2014</th><th>Milestone by end 2014</th><th>Achieved by March 2015</th></tr>
<tr><td rowspan="3">4.1 Transmission hotspots (areas with persistent transmission) treated with adjusted preventive chemotherapy (PCT)</td><td>Niger: 100% hotspots treated by adjusted PCT</td><td rowspan="3">70% hotspots treated by adjusted PCT</td><td>Niger: 100% hotspots treated by adjusted PCT</td></tr>
<tr><td>Zanzibar: 100% hotspots treated by adjusted PCT</td><td>Zanzibar: 100% hotspots treated by adjusted PCT</td></tr>
<tr><td>Uganda: 54% hotspots treated by adjusted PCT (30 out of 56 districts)</td><td>Uganda: 68% hotspots treated by adjusted PCT (38 out of 56 districts)</td></tr>
<tr><td rowspan="3">4.2 Percentage of heavily infected individuals in hotspots</td><td>Baseline
Niger (2011):
Sh=1.45%
Sm= n/a</td><td rowspan="3">Post 1 round of PCT: Sh:25%
Sm: 25% reduction from baseline</td><td>Post 1 round of PCT
Niger (2012):
Sh=0.48%</td></tr>
<tr><td>Uganda (2013):
Sm = 0.8%*</td><td></td></tr>
<tr><td>Zanzibar (2012):
Sh = 15.0%</td><td></td></tr>
</table>

The WHO recommends that a prevalence of less than 1% of heavily infected individuals is required to achieve elimination as a public health problem. Countries should move towards this aim following 5-10 years of PCT to control morbidity and adjust PCT accordingly; Zanzibar is undertaking bi-annual treatment of the entire eligible population, Uganda is treating SAC annually in identified hotspot areas within low transmission settings and Niger is treating SAC annually in high transmission settings through MDA and providing clinic-based treatment as required in low transmission settings.

The **Zanzibar Elimination of Schistosomiasis Transmission (ZEST)** is the Government-endorsed strategy for eliminating schistosomiasis from Zanzibar. ICOSA is supporting treatment across the entire eligible population of both islands on a bi-annual basis. A research component funded by the Bill and Melinda Gates Foundation is addressing whether other interventions (molluscicide, increased health education, additional access to water and sanitation facilities) are having an additional impact on prevalence and intensity of disease

beyond CT alone. During June 2014, a mid-term review observed that PCT is maintaining the prevalence of infection at low levels across both islands:

	Baseline 2012	2013	2014
Unguja	3.4%	3.2%	3.0%
Pemba	4.9%	4.5%	4.0%

These results could demonstrate how difficult it is to drive prevalence to 0% and/or be a reflection of the limit of our diagnostic tools to discern differences in low prevalence, low intensity infection areas. To ensure that the results are not related to reduced coverage during treatment campaigns, a coverage survey was undertaken in March-April 2015.

In **Uganda**, the percentage of the population with heavy intensity infections in hotspots is already within the WHO guidance for achieving elimination. The ICOSA health impact sentinel sites will continue to monitor the impact of the WHO recommended biennial treatment to determine if heavy intensity infections below 1% are being maintained and/or decreased with supplemental studies looking at the impact on prevalence and intensity of infection with increased frequency of treatment. ICOSA will encourage the MoH to strengthen collaborations with other sectors with the aim of implementing other schistosomiasis control interventions in these areas to achieve interruption of transmission.

In **Niger,** ICOSA activities remain focused in 7 low prevalence districts which takes the programme to 100% geographical coverage alongside the USAID support for NTDs. Hot-spot areas of transmission are receiving annual MDA. Impact evaluation which monitors changes in prevalence and intensity of SCH infection through sentinel schools is carried out in Niger by SCI and their in-country partners, RISEAL, as part of a SCORE funded study (University of Georgia / Bill and Melinda Gates Foundation). The results show a decrease in intensity and prevalence of heavy infection from baseline to post 1 round of PCT and further years of data are currently being analysed.

Challenges

The ongoing security situation in Niger has prevented staff from SCI from undertaking regular country visits, although two trips did proceed in the last quarter of 2014. The project is reliant on successful communication with the implementing partner, RISEAL, within Niger. During FY5, the Director of RISEAL and long-term SCI collaborator, Dr Amadou Garba, resigned to undertake a new role as the SCH lead within the NTD Department at WHO Geneva. His departure saw the responsibility within RISEAL pass to Dr Amina Garba which has required establishing a new working relationship between SCI and RISEAL. Given the inability to travel to Niger, SCI has invited both Dr Amina and the SCH Coordinator of the MoH for a planning meeting in London during the first quarter of FY6.

Opportunity

The evidence generated from coverage and sentinel site data will contribute significantly to identifying the most effective ways of adjusting the PCT strategy as more countries move towards elimination in time.

RTI's ENVISION project has been operating in Uganda simultaneously with ICOSA support for SCH. At the request of RTI and the MoH, the previous geographical split of donor support has been revised to ensure that those districts where SCH is still targeted for control of morbidity are receiving the necessary donor support to achieve that goal. As such, ICOSA will now provide support within the context of morbidity control in addition to evidence generation for elimination within Uganda. This treatment switch across the country will take place during FY6 and result in increased treatment numbers generated for the ICOSA project in Uganda.

Output 5: Lower cost per treatment achieved

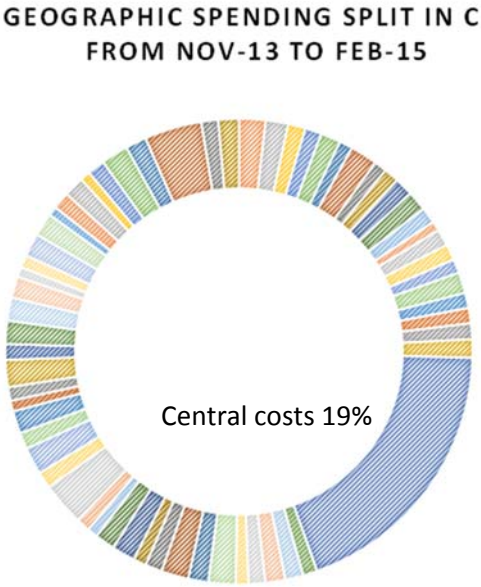
Although costs have been determined across multiple countries within this output, a lack of personnel and a robust system for measuring cost per treatment has resulted in slow progress. New processes have now been implemented to facilitate data collection and crucially, additional staff have been hired to review and analyse the data collected.

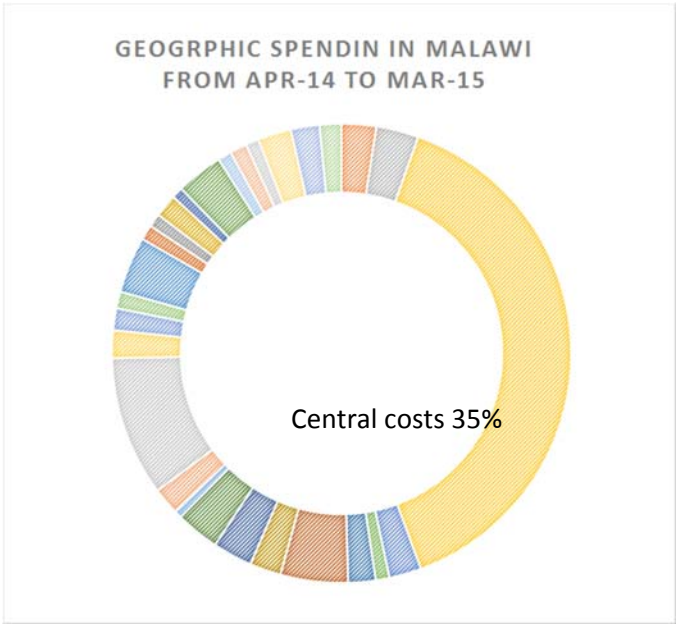
Output Indicator	Achieved by March 2014	Milestone by end 2014	Achieved by March 2015
5.1 Number of countries with financial cost per treatment determined	6	Costs determined in 6 countries	
5.2 Direct financial cost per treatment by country	<u>Post 1 round PCT</u> **Cote d'Ivoire**: £0.28 **Liberia**: £0.31 **Malawi**: £0.12 **Mozambique**: £0.04 **Zambia**: £0.27 **Tanzania**: £0.45 **Niger**: £0.17 **Uganda**: £0.27 **Zanzibar**: £0.08	4 countries achieving cost per treatment reduced from baseline (Post 1 round of PCT)	<u>Post 1 round PCT</u> **Cote d'Ivoire**†: £0.15 **Cote d'Ivoire**†: £0.17 Tanzania: £0.13 <u>Post 3 rounds PCT</u> **Malawi**: £0.04* **Niger**: £0.15

† 1st round of PCT in Cote d'Ivoire has been carried out in 3 phases

* Preliminary analysis of Malawi data

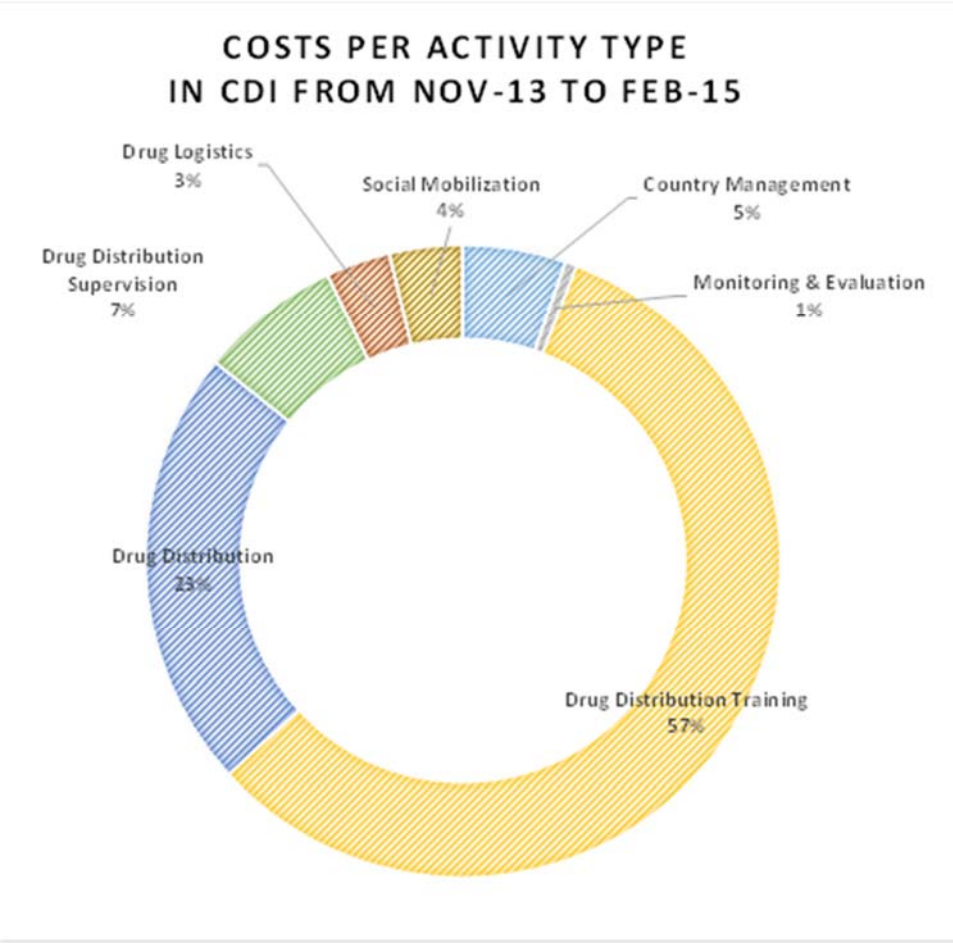
The cost data includes actual expenditure in-country against key budget lines with additional information on the location of spend and a description of the cost. The country specific detail on key costs will not only aid the analysis of value for money (VFM) across the countries, but allow more accurate budgeting in subsequent years.

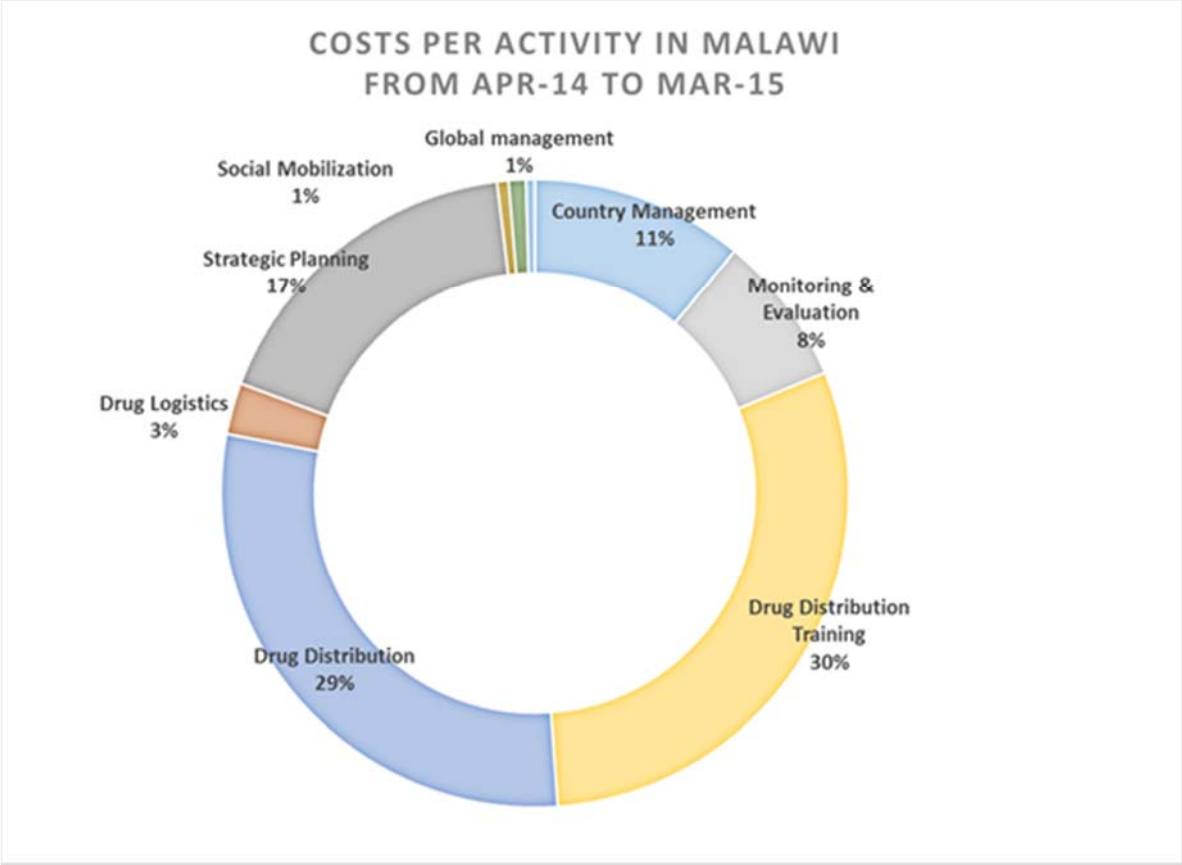




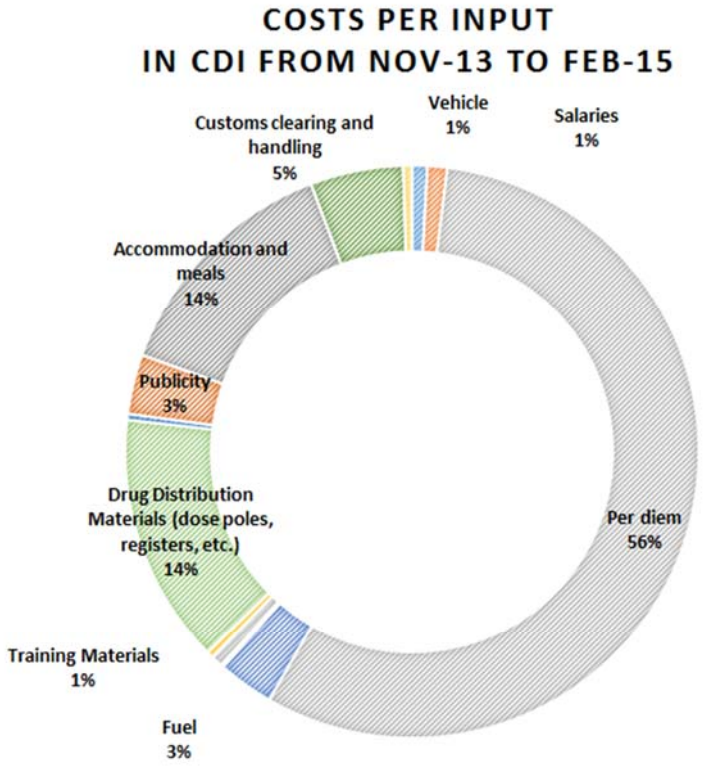
Geographic expenditure: The above figures show the attribution of spending at the geographical level. In Cote d'Ivoire central expenditures represent 19% of the total spending and districts evenly share the rest of the 81%. In Malawi, for the last financial year 35% of the costs have been spent at the central level with the majority being spent at the districts level (65%). Districts whose share is significantly larger than others correspond to highly populated districts.

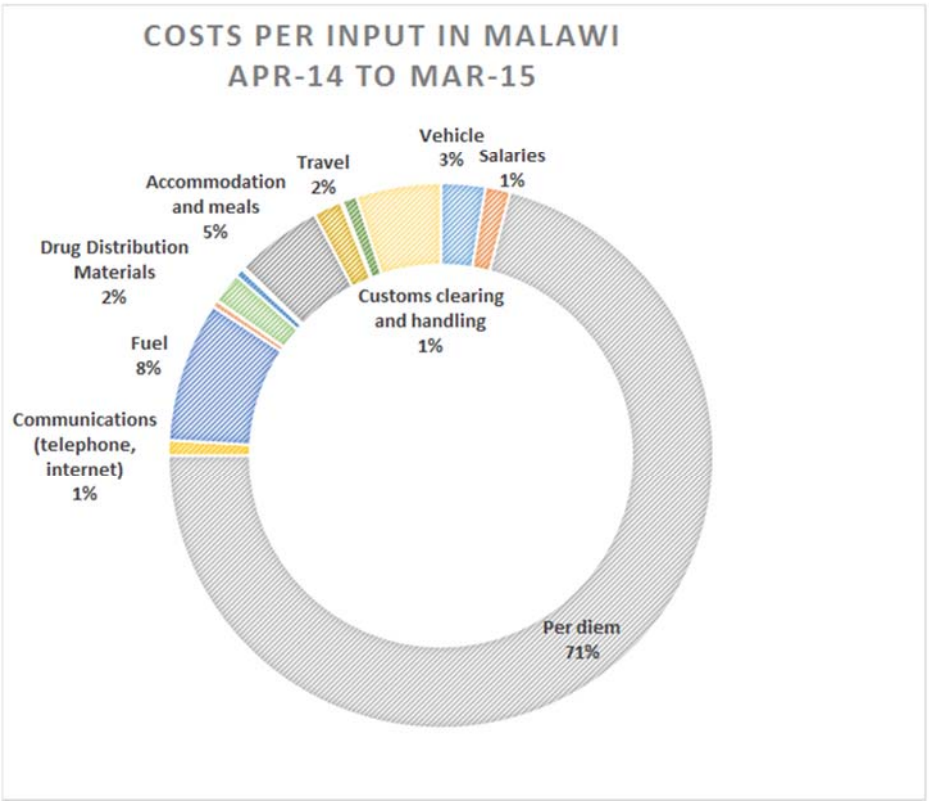
Cost per Activity: The two figures on the following page show the costs per activity for Cote d'Ivoire (top) and Malawi (bottom). The key cost drivers within programme activities are consistently costs associated with PCT distribution and the cascaded training of teachers, CDDs and CHWs. This is seen across those countries with data not shown here.


COSTS PER ACTIVITY TYPE
IN CDI FROM NOV-13 TO FEB-15
Drug Logistics
3%
Social Mobilization
4%
Country Management
5%
Drug Distribution
Supervision
7%
Monitoring & Evaluation
1%
Drug Distribution
23%
Drug Distribution Training
57%


COSTS PER ACTIVITY IN MALAWI
FROM APR-14 TO MAR-15
Global management
1%
Social Mobilization
1%
Country Management
11%
Strategic Planning
17%
Monitoring &
Evaluation
8%
Drug Logistics
3%
Drug Distribution
Training
30%
Drug Distribution
29%

As can be seen below, the key cost drivers by input are primarily per diems, including accommodation and meals, and fuel costs. Although there are variations across all of the countries there are clear patterns of how costs are allocated within the countries.





Challenges and Opportunity

The delay in the contract signature for Phase II subsequently delayed the recruitment for new positions which could only commence in July 2014 when additional human resource budget became available. Recruitment to Imperial College is guided under strict legal requirements and best practise principles therefore is often a time-intensive process. The ICOSA Value for Money Officer was recruited to post and joined SCI in December 2014. During the last quarter of FY5, the VFM officer has been working closely alongside a strengthened finance team to understand the cost component of the VFM metrics.

In order to facilitate the capture of financial data to input into VFM analyses, in addition to routine finance management, a cashbook was designed to record all financial transactions at country level. This has been rolled out to 8 of the 11 ICOSA countries (including Zanzibar) to date. Of those eight, 6 have been reporting on a regular basis and as at the end of April 2015, ICOSA is holding data for FY5 through to February 2015 and in some cases March 2015. Two countries, namely Ethiopia and Zanzibar have not submitted any cashbooks and will be prioritised to review existing processes and address shortcomings to ensure financial data is accurately reported. The Finance and Operations Senior Manager for the project will be visiting Ethiopia in the first instance in the first quarter of FY6.

A meeting was held in Liverpool in March 2015 to discuss the feasibility of rolling out the cashbook in CNTDs countries. A template that will enable standardisation of the data collected is now being tested in Zambia. Further work is required in Mozambique to take into account the large size of the country and various levels of reporting complexities within the country.

In parallel, the collation of finance information from earlier project financial years will remain ongoing.

Progress and Results

Summary of overall progress

The project has currently delivered a confirmed 44.47 million treatments by the end of March 2015 across 9 ICOSA countries, with further treatment data still being reported. By April 2015, all countries will have undertaken at least one round of MDA.

DFID have inserted a new clause into the contract extension for Phase II which includes performance based targets in relation to cumulative treatment numbers, measurable in June each year at the end of each contractual year. For June 2015, the PBR target is the delivery of 45.1 million treatments and the project is currently 0.6 million from reaching this milestone. Given that the anticipated 1.3 million treatments scheduled for Liberia during FY5 could not take place for external reasons, the project remains on track.

Reported coverage rates have been above the WHO recommended threshold of reaching at least 75% in all countries, as have validated coverage rates in SAC where data is available. Further data collection is progressing. Children not in school remain a challenge to reach through MDA but improvements have been seen where increased social mobilisation has occurred, namely in Malawi.

The log frame was updated as a result of the annual review in October 2014. The next milestone targets were developed for end 2016 but further targets have been suggested for end 2015 at the request of DFID, see Annex 2.

Key challenges

Integration

Although integrated approaches to NTD control and elimination are promoted, the coordination of the complex scope of activities at country level is often a challenge to timely implementation. Delays in one component can result in overall programmatic delays due to the interdependency of certain activities.

Operational and logistical challenges also arise from the coordination of activities, whereby savings made by cost-sharing activities may be reduced if that activity requires enhancing due to the additive complexity of integration, e.g. increased training and supervision for the delivery of a drug package than treatment for a single disease.

Integrated NTD programmes are also more sensitive to fluctuations in donor funds. A reliance on the support of one donor for certain aspects of the programme may lead to a shortfall for the whole should those funds no longer be available or delayed. The delay in signature of the Phase II contract placed the integrated MDA in DRC planned during FY5 on hold to ensure that the funds ICOSA was providing for key activities would be available. With the closure of the African Programme for Onchocerciasis (APOC) at the end of 2015, this may be particularly significant for those countries whose NTD programme has been built on the infrastructure of their APOC-funded Community-directed treatment with ivermectin (CDTI) projects.

Such challenges are mitigated by the project by ensuring strong collaborative links with other NTD partners both at the international and country levels, including:

International level:

- Links to NTD operational research grants utilizing ICOSA support as a platform to inform implementation guidelines and reciprocally generating impact data without cost to the project such as with SCORE in Niger and Zanzibar.
- Joint partner training on the use of the WHO-endorsed Tool for Integrated Planning and Costing (TIPAC) during July 2014; including SCI, CNTD, END Fund, RTI, Sightsavers alongside country programme managers from Liberia, Malawi, Zambia, Ghana and Nigeria.
- Joint partner training on the use of the WHO NTD database during June 2014; including SCI, CNTD, RTI, Malaria Consortium and Sightsavers, facilitated by WHO.

Country level:

- Cost shared activities. In Zanzibar, joint budgeting and planning for triple therapy MDA in December 2014 (SCI and CNTD) permitted 1 million SAC and adults to be targeted for SCH, STH and LF during one round of MDA. In Mozambique, PZQ was distributed alongside LF treatment during the MDA in November 2014 in a cost-shared integrated programme, again between SCI and CNTD. In DRC, the programme was fully integrated

with all partners contributing to the MDA in four provinces in December 2014, including SCI, CNTD, APOC and END fund.

- Leveraging additional donor support. In recognition of the DFID investment in Liberia, Ethiopia and DRC, the END Fund and other private donors are contributing to the MOH in each country either directly or via SCI to increase the scope of programme activities.

Management improvements

During FY5, SCI engaged Accenture Development Partnerships (ADP) to assist with systems strengthening in light of the recommendations of the ICOSA mid-term review in late 2013.

A new programme management system and tools have been developed to allow tracking achievement against milestones within country programmes, more regular reporting and risk escalation procedures. The programme management workbook has been implemented for all ICOSA countries since September 2014 and the monthly reporting schedule since February 2015. As with all new systems, there has been a necessary trial period where staff have familiarised themselves with the purpose and subsequent use of the tools, followed by a review to determine where improvements have been required. This scope of work has been conducted alongside routine project implementation which has placed time demands at particularly busy planning periods. However the tools are now being routinely used and the annual work planning and budgeting activities for FY6 have been undertaken using the new system.

During the majority of FY5 (until end December 2014), there has only been one finance staff member in post. Delays in additional staff recruitment, driven in part by the delay of contract signature for Phase II which released funds for new posts within the project and partly by recruitment procedures, resulted in a strengthened finance team only being made available to the project during the last quarter of FY5. However, there are now 3 full-time members of SCI staff; a Finance and Operations Senior Manager, an accountant and a finance assistant. DFID funds 1.8 FTE of this team. The focus of the team has been to collect financial data from the countries during this time. Continued collaboration with CNTD will also ensure that data collected in Liberia, Zambia and Mozambique are in line with requirements.

In recognition that countries receiving ICOSA support may require stronger in-country presence in some instances, the project is responding to needs as they arise. In Ethiopia, an SCI staff member has relocated to manage the DFID investment alongside that of other donors in supporting SCH and STH control. In Zambia, additional programme support has been contracted within country to oversee both LF and SCH/STH activities on behalf of CNTD.

Costs and timescales

The cumulative spend to 31st March 2015 is £9.3M compared to an agreed £10M budget up to the end of FY5:

	October 2010 to March 2015			
	Budget	**Actual**	**Variance**	
Total Management Fees	980,382	879,494	(100,888)	(10%)
Total Technical Fees	2,759,152	2,556,069	(203,083)	(7%)
Salary refund		(204,850)		
Total Fees	**3,739,534**	**3,230,713**	**(508,821)**	**(14%)**
Travel and Subsistence	577,815	468,110	(109,705)	(19%)
Technical Reimbursable	5,687,726	5,636,953	(50,773)	(1%)
Total Project Expenses	**6,265,541**	**6,105,063**	**(160,478)**	**(3%)**
ICOSA TOTAL	**10,005,075**	**9,335,776**	**(669,299)**	**(7%)**

All figures in GBP

There is a slight underspend in the cumulative spend of the programme, and this is mainly on the fees component of the budget, and travel. Fees were significantly underspent in FY5, following the delayed appointment of the Finance and Operations Senior Manager, Value for Money Officer and Database Administration and Analysis posts. Travel and Subsistence spend has been consistently under budget, due to restriction on travel to Liberia and Niger, as well as the delayed start of projects in DRC and Ethiopia.

Financial Controls and expenses review

The majority of the ICOSA countries have submitted a single work plan and budget that encompasses the full scale of programme activities they plan to undertake during FY6 (Liberia is outstanding until the scope for restarting NTD treatment is known). The standardised budget template facilitated the review and country comparison, and highlighted variances, notably in country management costs. Most of the budgets submitted only required minor adjustments.

The monthly review of the cashbooks and actuals vs budget forms an integral part of the programme financial controls. Variance analysis will enable the programme managers and finance staff to take corrective action. If needed this will then lead to inclusion in the country risk register.

A review of existing controls at country level has been started. This is being done through a standard questionnaire based on the Charity Commission recommended practice, the questionnaire is addressed to staff with financial responsibilities in country. To date this has been rolled out in Tanzania and Malawi. We are now looking at addressing the controls weaknesses identified in the survey, before rolling out to further countries. In Tanzania, it means that we are exploring options on ways to safely route the funds to the project, we are

looking at using third parties to hold the funds in country on behalf of SCI and strict guidelines on how the funds get released to the Ministry. This is the model that has been used in Cote d'Ivoire (via MAP International) and so far it has proven to be an efficient and secured way of controlling funds movements. We are evaluating our options in Ethiopia, this is included in the scope of the country visit in early June by the Finance and Operations Senior Manager.

Evidence and Evaluation

With the passing of the World Health Assembly resolution on SCH elimination, it is hoped that SCH national programmes (where they have not already started) will continue to scale-up. During FY5, the Global Schistosomiasis Alliance (GSA) was launched in Ethiopia, with SCI as a founding member alongside Merck, the Bill and Melinda Gates Foundation, USAID and World Vision, amongst others.

The GSA will bring together implementers and researchers across the globe to further support the goal of the WHO to eliminate SCH worldwide through focussing and coordinating efforts to address the remaining gaps and challenges to meet this target.

SCI will play a leading role in the working group being established to coordinate and assist implementation through enhancing and supporting country programmes. In addition, SCI will be involved in the work stream around strengthening monitoring and evaluation. As such, the data being collected and analysed within the ICOSA project will feed directly into these efforts to shape the direction of SCH elimination. The leverage opportunities to use the ICOSA-supported programmes as platforms for undertaking key operational research activities have been highlighted in previous reports.

Risk

The project risks have been most recently evaluated in the project Phase II business case.

One key risk to the project outcome, the successful delivery of 203.5 million treatments, and output 2, the delivery of 500 million tablets of PZQ into supported countries, is the dependency on the WHO allocation of Merck-donated PZQ. Currently, only 3 countries are consistently receiving an allocation of donated drugs, with a one-time donation to Malawi in 2011. The project will need to manage this risk by ensuring the ongoing engagement with WHO and Merck to advocate for ICOSA supported countries in addition to working closely with those countries to complete accurate and timely applications through the WHO joint request form for access to donated medication. To this end, the ICOSA Director visited Mozambique in March 2015 as part of an invited delegation comprising senior officials from Merck, and the Merck family.

At the country level, the financial and implementation risks will be captured in a risk register on an annual basis and updated monthly as programme activities progress through the year. Any new and immediate risks will be escalated and mitigated at the earliest opportunity.

ICOSA also includes implementation within countries deemed a high security risk, such as DRC. Through FY5, ICOSA staff undertook a Personal Security training course for field staff through Clarity who specialise in security training for humanitarian staff. All overseas visits are managed through risk assessments within both Imperial College and LSTM. Disturbances in DRC during a staff visit by SCI and CNTD in February 2015 led to a review of these process which were deemed to be appropriate and additionally recommended the purchase of a project satellite phone for emergency use when standard lines of communication are not viable.

Value for Money

In line with DFID's 3E Framework on Value for Money, and as previously reported, SCI has been developing VFM metrics which will help to determine a better understanding of costs and present relevant and comparable indicators on Economy, Efficiency and Cost-Effectiveness. SCI have now employed a Value for Money Officer to work under the MER team and in partnership with the Finance Team to analyse the impact and process numerator data with the denominator cost data. From their original presentation to DFID in August 2014, the VfM metrics have undergone several iterations. First internally (Jan 2015), reviewing the feasibility and sense checking of each metric developed by ADP and also identifying potential missing metrics.

Secondly, Dr Deborah McFarland, a highly regarded and very experience Health Economist and Health Systems expert from Emory University, visited SCI in February 2015. During her visit there was an in-depth analytical review of the metrics which were simplified to ensure that the data would be valuable to determine cost patterns across years, countries and other projects. The latter consideration was borne out of the need to have VfM metrics that could be used by SCI for the ICOSA project and other organisations, but in addition to that was the potential for the VfM metrics to be used under the auspices of the DFID NTD Partners Coordination. In March 2015, SCI led a meeting on reviewing the SCI VFM metrics with SightSavers and CNTD where the potential for at least one cross-cutting VfM metric could be used by all partners across DFID funded NTD projects. The general conclusion was that cost per person treated (by an of the DFID partner interventions) would be the most realistic cross-cutting metric and that the costs included in this would need agreed upon standardisation between the programmes e.g. direct financial costs only and what exactly is covered under that. In addition the reporting of 'shared costs' as a result of integration were discussed with further decision to be made on how these are reported.

The outcomes of these meetings have resulted in the following revised VfM metrics:

VFM Criteria	VFM Metric	Source
Economy	Cost of inputs (e.g. staff, per diems, fuel, raw materials etc.) by country/ by year	Financial / budget documents
	Costs of activity (e.g. sensitisation, drug distribution, supervision) by country/ by year	Financial / budget documents
	Costs of drugs & distribution to countries	Financial / Procurement / Budget documents

Efficiency	Average cost per person treated	Financial / budget documents / NTD database
	Treatments delivered per trained drug distributor (e.g. teacher, community health worker, health surveillance assistant etc)	Financial / budget documents / Process indicators
	Work-plan and budget implemented on time	Programme Implementation plans / process indicators
Cost-effectiveness	Cost per treatment delivered	Financial / budget documents / performance indicators
	Costs per coverage of eligible population	Financial / budget documents / performance indicators
	Cost per DALY averted (by country)	Financial / budget documents / impact indicators
Equity	Villages reached by MDA not reached by health services	MoH in countries

The next step is, on the recommendation of Iain Jones (DFID Advisor) for SCI to initiate another meeting with the DFID NTD Partners to which we invite DFID to give their feedback on the proposed metrics.

ANNEX 1: Anticipated treatment schedule in line with performance based targets

	YEAR		Cote D'Ivoire	Liberia	Malawi	Mozambique	Tanzania	Zambia	Niger	Uganda	Zanzibar†	DRC	Ethiopia	TOTAL	Cumulative Total
No. of treatments delivered and distributed to countries in line with WHO treatment strategy	1st October 2010 - 31st March 2014	**Actual Treatment numbers**	*1.5*	*0.6*	*4.1*	*10.0*	*2.2*	*0.1*	*2.1*	*1.0*	*3.7*	*0.0*	*0.0*	***25.3***	***25.3***
	1st April 2014 - 31st March 2015	**Actual Treatment numbers**	*3.1*	*0.0*	*4.3*	*4.3*	*2.1*	*1.0*	*1.2*	*0.0*	*1.6*	*1.6*	*0.0*	***19.2***	***44.5***
	1st April 2015 - 31st March 2016	*Target Treatment Numbers*	*0.6*	*0.1*	*5.5*	*10.0*	*4.3*	*2.1*	*2.2*	*1.2*	*2.0*	*1.5*	*7.0*	***36.5***	-
		Assuming 80% coverage	*0.5*	*0.1*	*4.4*	*8.0*	*3.4*	*1.6*	*1.8*	*1.0*	*1.6*	*1.2*	*5.6*	***29.2***	-
		Total number of treatments	*0.5*	*0.1*	*4.4*	*8.0*	*3.4*	*1.6*	*1.8*	*1.0*	*1.6*	*1.2*	*5.6*	***29.2***	***73.6***
	1st April 2016 - 31st March 2017	*Target Treatment Numbers*	*5.3*	*1.3*	*5.5*	*10.0*	*3.0*	*2.1*	*2.2*	*2.0*	*2.0*	*6.6*	*15.0*	***55.0***	-
		Assuming 80% coverage	*4.2*	*1.0*	*4.4*	*8.0*	*2.4*	*1.6*	*1.8*	*1.6*	*1.6*	*5.3*	*12.0*	***44.0***	-
		Total number of treatments	*4.2*	*1.0*	*4.4*	*8.0*	*2.4*	*1.6*	*1.8*	*1.6*	*1.6*	*5.3*	*12.0*	***44.0***	***117.6***
	1st April 2017 - 31st March 2018	*Target Treatment Numbers*	*0.8*	*1.3*	*0.0*	*10.0*	*3.0*	*2.1*	*2.2*	*2.0*	*2.0*	*6.6*	*18.3*	***48.2***	-
		Assuming 80% coverage	*0.6*	*1.0*	*0.0*	*8.0*	*2.4*	*1.6*	*1.8*	*1.6*	*1.6*	*5.3*	*14.6*	***38.6***	-
		Total number of treatments	*0.6*	*1.0*	*0.0*	*8.0*	*2.4*	*1.6*	*1.8*	*1.6*	*1.6*	*5.3*	*14.6*	***38.6***	***156.2***
	1st April 2018 - 30th December 2018	*Target Treatment Numbers*	*5.3*	*1.3*	*5.5*	*10.0*	*3.0*	*2.1*	*2.2*	*3.0*	*2.0*	*6.6*	*18.3*	***59.2***	-
		Assuming 80% coverage	*4.2*	*1.0*	*4.4*	*8.0*	*2.4*	*1.6*	*1.8*	*2.4*	*1.6*	*5.3*	*14.6*	***47.4***	-
		Total number of treatments	*4.2*	*1.0*	*4.4*	*8.0*	*2.4*	*1.6*	*1.8*	*2.4*	*1.6*	*5.3*	*14.6*	***47.4***	***203.5***
		Total treatments by 2018	**14.2**	**3.8**	**21.6**	**46.3**	**14.9**	**7.6**	**10.3**	**7.5**	**11.7**	**18.7**	**46.8**	**203.5**	

ICOSA LOG FRAME
revised for Apr 2015.