

# Learner Treatment Kit (school-based malaria diagnosis and treatment in southern Malawi): Study data and support materials

## Data Creators

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## Data Description

A set of data collection tools, STATA .do processing scripts, and resultant datasets produced as part of the Learner Treatment Kit (LTK) Project, a study funded to evaluate the impact of a school-based programme of malaria diagnosis and treatment (malaria case management) as part of a wider school first-aid kit exploring school attendance, health and education outcomes. The study conducted a cluster randomized controlled trial in 58 primary schools in TA Chikowi, Zomba district of southern Malawi. The intervention, implemented between 2013-2015 in 29 randomly selected schools from the total of 58 schools, comprised providing free-of-charge malaria rapid diagnostic tests (RDTs) and artemisinin-based combination therapy (ACT) to primary schools to be used by trained teachers to diagnose and treat uncomplicated malaria, as part of basic first aid kits known as "Learner Treatment Kits" (LTKs). The primary outcome was school attendance, assessed through teacher-recorded school attendance registers and periodic spot checks. Secondary outcomes included prevalence of *Plasmodium* spp. infection, anaemia, educational performance, self-reported child wellbeing, and health seeking behaviour. The trial is registered with ClinicalTrials.gov, NCT02213211.

## Data Collection Methods

- *Teacher-recorded daily attendance*: Full enrolment lists for each school were collected by the study team, compiled as master enrolment lists and used to populate class registers. These were distributed to teachers in five-week periods and were then completed daily for each child.
- *Spotcheck-observed attendance*: Unannounced visits to each school was conducted by a study enumerator at least once a term. Using the master enrolment lists, every child's name in classes 2, 4 and 6 was read out and their presence or absence documented.
- *Child-reported wellbeing*: Using the master enrolment lists, charts were prepared listing every child in the class. These were placed on the relevant classroom wall and on set days children were required to draw a happy, neutral or sad face depending on whether they felt well, average or ill on the day.
- *Parent-reported attendance*: During interviews at the endline survey, parents were asked how many days of school their child had missed the last time they were ill.
- *Clinical outcomes (malaria parasitaemia, anaemia)*: At baseline and endline, a finger-prick sample of blood was used to assess haemoglobin concentration and to prepare a thin and thick blood film for confirmation and quantification of malaria parasites on the basis of expert microscopy.
- *Education outcomes (literacy, numeracy & sustained attention)*: Children were assessed using age appropriate tests of literacy and numeracy (baseline and endline) and sustained attention (baseline only).
- *Household & school-level data*: Caregivers of study children were interviewed regarding their family size, ownership of possessions, education level, and bed net use by themselves and their children. Interviews were

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conducted with the head teacher of each school to ascertain school size, enrolment, and school health programmes such as school-feeding or deworming.

- *Health seeking behaviour:* Caregivers of study children were interviewed regarding usual and recent health seeking behaviour for their child during questionnaires administered at the endline survey.
- *Treatment consultations:* Treatment registers were distributed to all LTK dispensers in the intervention schools. Every child reporting to the dispenser was recorded in the treatment register with details of child seeking care, symptoms reported or observed, and action taken by the LTK dispenser.

## Geographic regions

Data collected in 58 primary schools in TA Chikowi, Zomba District, southern Malawi



## Key dates

Implementation of the intervention and follow-up data collected between 2013-2015, Baseline data collected in 2011 and endline data collected in 2015.

## Species:

Human population

## Ethics

Approval obtained from the LSHTM Ethics Committee (References: 5914, 6432). Approval also obtained from the National Health Sciences Research Committee (NHSRC) Malawi (ref. 1057) and College of Medicine Research and Ethics Committee (COMREC) ref. P.02/11/1036.

## Keywords

Malaria, Plasmodium falciparum, Case management, Rapid diagnostic tests, Artemisinin-based Combination Therapy, Teachers, School children, School health, Malawi, Africa

## Language of written material

English, Chichewa

## File Description

Filename	File type	Description
<b>LTK_Data.zip</b>		
<b>Do files</b>		
analysis.do	STATA .do file	A Stata .do file to generate all of the numerical results included in the funder report and publication.
CONSORT.do	STATA .do file	A companion Stata .do file (required by analysis.do) to generate the numerical results included in the CONSORT flow diagram)
pca.do	STATA .do file	A companion Stata .do file (required by analysis.do) to generate wealth quintiles based on a principal components analysis
standardise.do	STATA .do file	A companion Stata .do file (required by analysis.do) to generate class-standardised literacy and numeracy test scores)
<b>Final datasets</b>		
baseline.dta	STATA Data file	Dataset containing characteristics of schools and children surveyed at baseline
endline.dta	STATA Data file	Data containing characteristics of schools and children collected during follow-up and endline surveys, and all outcomes reported in the funder report and publication
<b>Intermediate files</b>		
sampling list.dta	STATA Data file	Dataset containing list of children randomly sampled for follow-up and endline analysis.
educational outcomes list.dta	STATA Data file	Dataset containing list of children with educational outcomes at endline survey.
health outcomes list.dta	STATA Data file	Dataset containing list of children with health outcomes at endline survey.
spotchecks_consort.dta	STATA Data file	Dataset of spotcheck results used to produce CONSORT flow diagram
Log files		An empty folder necessary to run the analysis correctly
<b>LTK_Data Collection_Instruments.zip</b>		
LTK_Baseline_Child_Survey_2011-05-04.docx	Microsoft Word Open XML	Baseline child survey
LTK_Baseline_Parent_Survey_2011-05-04.docx	Microsoft Word Open XML	Baseline parent survey
LTK_Baseline_School_Survey_2011-05-04.docx	Microsoft Word Open XML	Baseline school survey
LTK_Daily_Attendance_Register_Final.docx	Microsoft Word Open XML	Daily attendance register

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LTK_Education_Assessment_Attention_AAS12_b1-2_eNA_Instructions.pdf	Adobe PDF 1.5	ATT12 Task - Pencil Tapping
LTK_Education_Assessment_Attention_AAS34_b3-4_eNA_Instructions.pdf	Adobe PDF 1.5	Code Transmission Group - Listening for numbers
LTK_Education_Assessment_Attention_AAS58_b5-8_eNA_Instructions.pdf	Adobe PDF 1.5	Listening for Numbers exercise: Two Numbers
LTK_Education_Assessment_Literacy_LAS12_b1-1_eNA_Instructions.pdf	Adobe PDF 1.5	Literacy 1-2 (Assessment sheet)
LTK_Education_Assessment_Literacy_LAS34_b3-4_e2-4_Instructions.pdf	Adobe PDF 1.5	Literacy 3-4 (Instruction sheet)
LTK_Education_Assessment_Literacy_LAS56_b5-6_e5-6_Scoring_sheet.pdf	Adobe PDF 1.5	Literacy 5-6 (Scoring sheet)
LTK_Education_Assessment_Literacy_LAS78_b7-8_e7-8_Scoring_sheet.pdf	Adobe PDF 1.5	Literacy 7-8 (Scoring sheet)
LTK_Education_Assessment_Literacy_LIT12_b1-2_eNA_Response_sheet.pdf	Adobe PDF 1.5	Literacy 1-2 (Scoring sheet)
LTK_Education_Assessment_Literacy_LIT34_b3-4_e2-4_Response_sheet.pdf	Adobe PDF 1.5	Literacy 3-4 (Response sheet)
LTK_Education_Assessment_Literacy_LIT56_b5-6_e5-6_Response_sheet.pdf	Adobe PDF 1.5	Literacy 5-6 (Response sheet) - Pupil spelling sheet
LTK_Education_Assessment_Literacy_LIT78_b7-8_e7-8_Response_sheet.pdf	Adobe PDF 1.5	Literacy 7-8 (Response sheet) – Pupil spelling sheet
LTK_Education_Assessment_Literacy_LSC34_b_3-4_e2-4_Scoring_sheet.pdf	Adobe PDF 1.5	Literacy 2-4 (Scoring sheet)
LTK_Education_Assessment_Literacy_X_b5-6_e5-6_Instructions.pdf	Adobe PDF 1.5	B5-6 Spelling task instruction sheet
LTK_Education_Assessment_Literacy_X_b7-8_e7-8_Instructions.pdf	Adobe PDF 1.5	B7-8 spelling task instruction sheet
LTK_Education_Assessment_Numeracy_MAS34_b3-4_e2-4_Instructions.pdf	Adobe PDF 1.5	Numeracy 2-4 – Maths task instructions
LTK_Education_Assessment_Numeracy_MAS58_b5-8_e5-8_Instructions.pdf	Adobe PDF 1.5	Written numeracy task 5-8 instructions
LTK_Education_Assessment_Numeracy_MAT12_b1-2_eNA_Response Sheet.pdf	Adobe PDF 1.5	Quantity discrimination and number naming exercise
LTK_Education_Assessment_Numeracy_MAT34_b3-4_e2-4_Response sheet.pdf	Adobe PDF 1.5	Numeracy 2-4 - Missing number exercise response sheet.
LTK_Education_Assessment_Numeracy_MAT58_b5-8_e5-8_Response sheet.pdf	Adobe PDF 1.5	Written numeracy task (5-8) response sheet
LTK_Education_Assessment_Pencil_Tap_Shading_2010.pdf	Adobe PDF 1.5	Pencil tap shading exercise
LTK_Endline_Child_Survey_Final.docx	Microsoft Word Open XML	Endline Survey - Child questionnaire
LTK_Endline_Parent_Survey_Final.docx	Microsoft Word Open XML	Endline Survey - Parent questionnaire
LTK_Endline_School_Survey_Final.docx	Microsoft Word Open XML	Endline survey - School
LTK_Referral_Form_Final.docx	Microsoft Word Open XML	LTK referral form
LTK_SAE_Reporting_Form_Final.docx	Microsoft Word Open XML	Study severe adverse event reporting form
LTK_Spotcheck_Register_Final.xlsx	Microsoft Excel Open XML	Spotcheck attendance register

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LTK_Treatment Register_Final.docx	Microsoft Word Open XML	Learner treatment register for the school
LTK_Wellbeing Chart_Final.xlsx	Microsoft Excel Open XML	Wellbeing Chart
<b>LTK_ConsentForms.zip</b>		
LTK Baseline_Child_Assent_Form_Chichewa.docx	Microsoft Word Open XML	Child assent form for baseline collection - Chichewa language
LTK_Baseline_Child_Caregiver_Consent_Form_Chichewa.docx	Microsoft Word Open XML	Caregiver consent form for baseline data collection - Chichewa language
LTK_Baseline_Child_Information_Form_Chichewa.docx	Microsoft Word Open XML	Information sheet for baseline data collection - Chichewa language
LTK Baseline_Child_Assent_Form_English.docx	Microsoft Word Open XML	Child assent form for baseline collection - Chichewa language
LTK_Baseline_Child_Caregiver_Consent_Form_English.docx	Microsoft Word Open XML	Caregiver consent form for baseline data collection – English language
LTK_Baseline_Child_Information_Form_English.docx	Microsoft Word Open XML	Information sheet for baseline data collection – English language
LTK_Endline_Child_Assent_Form_Chichewa.docx	Microsoft Word Open XML	Child assent form for endline data collection - Chichewa language
LTK_Endline_Child_Caregiver_Consent_Form_Chichewa.docx	Microsoft Word Open XML	Caregiver consent form for endline data collection - Chichewa language
LTK_Endline_Child_Information_Form_Chichewa.docx	Microsoft Word Open XML	Information sheet for endline data collection - Chichewa language

### Project

School-based Programme of Malaria Diagnosis and Treatment in Southern Malawi

Learner Treatment Kit (LTK) Project

### Funder/Sponsor

International Initiative for Impact Evaluation (3ie), Save the Children

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