Tanzania - Dynamic electronic decision trees to manage sick children in Tanzania - Phase 1 cRCT data

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Identification

SURVEY ID NUMBER
10.16909-dataset-58

TITLE
Dynamic electronic decision trees to manage sick children in Tanzania - Phase 1 cRCT data

SUBTITLE
Master dataset from "Phase 1" cluster randomized trial

ABBREVIATION OR ACRONYM
DYNAMIC TZ

COUNTRY

Name
Tanzania

ABSTRACT
A pragmatic digital health project to improve quality of care and antibiotic stewardship in primary care level health facilities in Tanzania for the management of sick children less than 15 years of age. The data provided here are from the first open-label parellel group pragmatic cluster randomized trial in 40 health facilities in Tanzania to evaluate the impact of a digital clinical decision support algorithm compared to usual care on antibiotic prescribing and clinical outcome among children with an acute illness presenting to primary care health facilities.

KIND OF DATA
Clinical data [cli]

UNIT OF ANALYSIS
Individual consultations

Version

VERSION DESCRIPTION
version 2: Edited, de-identified dataset, for internal use only

VERSION DATE
2025-01-01

Scope

NOTES
Clinical data: Symptoms, signs, test results, diagnoses, treatment, clinical outcome at D7, hospitalization, referral
Demographics: age, sex

Coverage

GEOGRAPHIC COVERAGE
Mbeya and Morogoro region
Councils in Morogoro region: Ulanga DC, Mlimba DC, Ifakara TC
Councils in Mbeya region: Mbeya CC, Mbeya DC
Semi-urban and rural areas

Producers and sponsors

PRIMARY INVESTIGATORS

Name	Affiliation
Valerie D'Acremont	Unisanté, Center for Primary Care and Public Health & University of Lausanne, Lausanne, Switzerland
Honorati Masanja	Ifakara Health Institute
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FUNDING AGENCY/SPONSOR

Name	Abbreviation	Role
Fondation Botnar		Funding
Swiss Development Cooperation	SDC	Funding

Sampling

SAMPLING PROCEDURE

Sampling, randomization and masking

The 40 health facilities were randomly selected from all eligible health facilities in the participating councils following a 3:2 ratio between health facilities from the Morogoro and Mbeya region (to include more health facilities in the higher malaria transmission area). In addition, to include a representative sample of health centers compared to dispensaries, four health centers per region were included.

The sampled health facilities were then randomized (1:1) to ePOCT+ (intervention) or usual care (control). Randomization was stratified by region, council, level of health facility (health center versus dispensary) and attendance rate. An independent statistician in Switzerland was provided with the list of all eligible health facilities and performed computer-generated sampling and randomization. Intervention allocation by the study team was only shared with study investigators in Tanzania once all council leaders had confirmed the participation of their selected health facilities. The nature of the intervention did not allow for masking of the intervention to health-care providers, patients or study implementers.

Data collection

DATES OF DATA COLLECTION

Start	End
20211201	20221031

DATA COLLECTION MODE

Other [oth]

DATA COLLECTION NOTES

Overall, 59,875 children were screened for inclusion between 1 December 2021 and 31 October 2022, and 44,306 (74%) consultations were enrolled (23,593 in ePOCT+ health facilities and 20,713 in usual care health facilities). The first health facilities started enrolling patients on 1 December 2021, and the last health facilities started enrolling patients on 13 April 2022. A total of 28,243 unique patients were enrolled with a mean of 1.6 consultations per patient over the duration of the study. Among those enrolled in the intervention health facilities, 17,985 (76.2%) consultations were managed using ePOCT+, and day 7 outcome was ascertained in 20,355 consultations (86.3%). In usual care health facilities, 18,937 (91.4%) consultations had final treatment documented in the electronic case report form (eCRF), and 17,292 consultations (83.5%) had day 7 outcome ascertained. Information technology (IT) problems and power outages were reported by research assistants on respectively 293 (7.3%) and 245 (6.1%) health facility days in ePOCT+ facilities, and 160 (4.1%) and 245 (6.1%) health facility days in usual care facilities. Both issues contributed to children being prevented from enrollment in the study.

Data Processing

DATA EDITING

Demographic information was collected and entered in the eCRF (ePOCT+ for intervention health facilities and eCRFs for usual care facilities within the data collection system medAL-reader) by registration research assistants. Clinical data was entered by the routine clinicians in both study arms, however clinical data limited in the control arm. 7 days after the initial consult research assistants made phone calls to all participants to collect data on clinical outcome, further healthcare use, and further use of additional medications not prescribed.

Access policy

CONTACTS

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CONFIDENTIALITY

All requests for use of data should be directed towards rainer.tan@unisante.ch or valerie.dacremont@unisante.ch

ACCESS AUTHORITY

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LOCATION OF DATA COLLECTION

Unisanté Data repository

Data Dictionary

Data file	Cases	Variables