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DISSEMINATION WORKSHOP REPORT

# **Training in case management: Lessons learnt working in the Lake Zone, Tanzania, 2012-2014**



SEPTEMBER 2014

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This technical report was prepared by University Research Co., LLC (URC) for review by the United States Agency for International Development (USAID) and authored by Dr. Festus Kalokola of URC under The USAID Diagnosis and Management of Severe Febrile Illness (Tibu Homa) Program. The Tibu Homa Program is managed by URC under Cooperative Agreement No. 621-A-00-11-00011-00 and is made possible by the generous support of the American people through USAID.



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**DISCLAIMER**

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## **Acknowledgements**

The USAID Diagnosis and Management of Severe Febrile Illness (Tibu Homa) Program would like to acknowledge all of the people who contributed to the case management training with the Tibu Homa Program in the Lake Zone. This training was supported by the American people through the United States Agency for International Development (USAID), the Ministry of Health and Social Welfare (MoHSW) of the United Republic of Tanzania, the regional Health Management and Council Health Management teams respectively.

The Diagnosis and Management of Severe Febrile Illness (Tibu Homa) Program is made possible by the generous support of the American people through the United States Agency for International Development (USAID) and is implemented under Cooperative Agreement Number AID-621-A-00-11-00011-00. The program team includes prime recipient, University Research Co., LLC (URC), and sub-recipients Management Sciences for Health (MSH) and Amref Health Africa. The program was supported by the USAID Tanzania Mission whose strategic objective is to improve the health status of Tanzanian families with a development objective of Tanzanian women and youth empowered.

### **Recommended citation:**

Kalokola F. 2014. Training in case management: Lessons learnt working in the Lake Zone, Tanzania, 2012-2014. *Dissemination Workshop Report*. Published by the Tibu Homa Program for the United States Agency for International Development. Mwanza, Tanzania: University Research Co., LLC.

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### Acronyms

CHMT	Council Health Management Team
CM	Case management
DMO	District Medical Officer
HCWs	Health care workers
HMIS	Health Management Information System
ICATT	Integrated Management of Childhood Illnesses Computerized Adapted Tool
IMCI	Integrated management of childhood illness
MoHSW	Ministry of Health and Social Welfare
mRDT	Malaria rapid diagnostic test
MSH	Management Sciences for Health
PQIT	Pediatric quality improvement teams
QI	Quality improvement
RCM	Referral Care Manual
RHMT	Regional/Council Health Management Team
RMO	Regional Medical Officer
R&R	Recording and request forms
THP	Tibu Homa Program
UNICEF	United Nations International Children's Fund
URC	University Research Co., LLC
USAID	United States Agency for International Development
WHO	World Health Organization

## **ABSTRACT**

Over the past three years, the Tibu Homa Program (THP) has been implementing an intervention to improve case management of children under five with fever in the Lake Zone (Kagera, Mara, Mwanza, Geita, Shinyanga, Simiyu regions) of Tanzania through health facility system strengthening. The Lake Zone was identified by the Ministry of Health and Social Welfare (MoHSW) and the United States Agency for International Development (USAID) because of its high under-five mortality rate, above the national average, and a high prevalence of malaria.

The program used a new, adapted integrated management of childhood illness (IMCI) guideline that among other things directs children with fever to be treated for malaria only upon laboratory evidence and that guides the management of other malaria-negative patients for other causes of fever. Improving case management (CM) demanded a number of interventions to address issues of inefficient patient flow, evidence-based treatment of confirmed malaria, stock-out of essential medicines and supplies, patient information documentation, and use of data for decision making.

THP worked with Regional/Council Health Management Teams (R/CHMTs) to establish pediatric quality improvement teams (PQITs) that received training in improved diagnosis and treatment of children with severe febrile illnesses, logistic management, quality malaria rapid diagnostic test (mRDT) training, and data management. These teams, with the support of health facility management and a team of R/CHMT, logistic, quality improvement and clinical mentors, led efforts in their facilities to improve case management. The trainings were done using the national training guidelines. R/CHMTs, logistics, quality improvement and clinical mentors also received training in improvement methods and in supportive supervision and mentorship in their respective areas and provided regular monthly supportive supervision/mentorship visits.

The PQITs identified gaps in case management, tested and implemented changes to address the gaps, and assessed and documented their performance on a monthly basis. They met quarterly to share improvement results.

Case management implementation started in three initial regions of Mwanza, Mara, and Kagera and more recently spread to involve some of the remaining health facilities in the initial regions and to the new regions of Shinyanga, Simiyu, and Geita. As of March 2014, 30% of health facilities have been covered and 1279 HCWs have been trained in case management, quality improvement, logistic supply management, and data management. Altogether a pool of 176 trained mentors has been established and is already involved in health facility monthly visits.

In all, 395 health facility pediatric improvement teams were established. As a result of their work, new patient flow maps have been implemented, resulting in more efficient clinics and inpatient services and an increase in percent of children being tested for malaria. This allows for evidence-based malaria treatment and getting febrile children managed appropriately for other causes of fever as shown by improvement in compliance to Referral Care Manual and IMCI guidelines. Health facilities have also shown improvement in patient information documentation, data management, sharing, and use for decision making for further improvement.

Establishment of PQITs and training them with a package that addresses quality improvement, clinical care, logistic supply management and patient information documentation and making use of data for decision making coupled with regular mentorship and supportive supervision have led to significant case management improvements.

## I. INTRODUCTION

Integrated management of childhood illness (IMCI) was developed by the World Health Organization (WHO) and the United Nations International Children's Fund (UNICEF) to reduce childhood morbidity and mortality in resource-limited settings. IMCI was introduced in Tanzania in 1996 and scaled up in all districts in the country in 1998.

In a multi-country study including Tanzania, IMCI implementation improved the quality of care provided by health care workers (HCWs), lowered under-five mortality by 13%, and was cost effective. However, the biggest stumbling block to expanding IMCI coverage was the cost of the 11 day residential training course and having HCWs out of their health facilities for a long time for training, which affected patient care. Although training was then decentralized in the essential health package, district budgets were not available to achieve the target recommended by WHO of 60% of health care workers trained in IMCI.

Integrated Management of Childhood Illnesses Computerized Adapted Tool (ICATT) training, especially for pre-service and distant learning in service, has been adopted by Tanzania as an alternative method to the 11-day residential training to help improve coverage at relatively low cost.

On the basis of these current guidelines, it has been estimated that 10- 20% of sick children who are presented for primary care (i.e., the most severely ill) may require referral to a first referral or district hospital. Unfortunately, there is good evidence that hospital care is often deficient in many countries, including a study of 21 hospitals across 7 countries in Asia and Africa.

In the United Republic of Tanzania, the Referral Care Manual (RCM) based on the WHO IMCI algorithm was adopted as policy in 2005. Although not widely implemented, it defines a framework within which current standards of care can be evaluated and improved.

Previous research has shown that many health workers do not adhere to IMCI guidelines, particularly for the management of severe illness.

A number of factors have been described to contribute to health workers' non-adherence to IMCI guidelines, such as the use of single, narrow diagnoses rather than IMCI classifications; the belief that chloramphenicol is unacceptably toxic; the perception that referring severely ill children is often unnecessary; frequent changes and updates in management of childhood diseases without their incorporation in IMCI guidelines; shortage of medicines and supplies; frequent turnover among trained HCWs; inadequate mentorship and supportive supervision; inadequate supplies of IMCI guidelines and job aids; and insufficient refresher courses.

For these reasons, the USAID-funded Tibu Homa Program (THP) set to reduce under-five morbidity and mortality in the Lake Zone of Tanzania by using the IMCI platform to improve health facility diagnosis and treatment of under-fives. Tibu Homa is implemented by the University Research Co., LLC (URC) in collaboration with Management Sciences for Health (MSH) and the Amref Health Africa. A combination of interventions has been used by the program to improve case management:

- Improve health care workers' knowledge and skills through training using the updated IMCI guidelines for the first level health facilities and the Referral Care Manual for the hospitals.
- Strengthen laboratory diagnosis of malaria through training of more health workers in malaria rapid diagnostic test (mRDT) use and task shifting to enable health facilities to provide a 24-hour laboratory service.
- Improve HCWs' skills at all levels in logistic management to ensure constant availability of essential medicines and supplies.

- Strengthen HCWs' skills in documentation of patient information and data management.
- Trained HCWs are empowered with quality improvement (QI) methods and transformed into pediatric quality improvement teams (PQITs) that implement the case management improvement activities at health facilities at all levels.

## II. METHODOLOGY

In order to improve the diagnosis and treatment of children with severe febrile illnesses, THP in collaboration with R/CHMTs, identified four health care workers that are involved in the care of children from pediatric Outpatient Department (OPD) and inpatient department of the health facility in cases of hospitals and health centers, and 1-2 health care workers from dispensaries. These together with one health care worker from the laboratory and pharmacy units each formed the multidisciplinary PQIT that were invited for case management training.

The nurses and clinicians from hospitals received a three-day case management training using the MOHSW Referral Care Manual (Management of a child with a serious infection or severe malnutrition), in what we described as Learning Session 1a, while clinicians and nurses from health centers and dispensaries received a three-day training using 11 day training guidelines initially before adopting a distance-IMCI package for the health center and dispensary health care workers in what was termed as Learning Session 1b. In both cases, monthly supportive supervision/coaching and clinical mentorship have been conducted to strengthen their skills on the job.

The pharmacists and the laboratory technologists from the hospitals received a three-day Logistic Management training using the approved nationally approved guidelines at the same time that clinicians and nurses were receiving case management training. All participants for Learning Session 1b received logistic management training, because all of them are involved in managing medicines and supplies.

All members of the PQITs participating in Learning Session 1a and 1b receive a three-day QI training where they were introduced to an improvement model, a "Plan Do Study Act" cycle and shown how to identify gaps in case management, identify causes behind the gaps, identify solutions, and develop plans to test the identified solutions to determine and adopt changes that will be found to bring the required results.

At the end of the training, teams developed work plans on how to implement the changes and share the plans with the rest of the staff handling children and the health facility management. They also received the case management guidelines and job aids and a team journal for documenting their improvement work.

All the PQITs were organized in a wedge improvement collaborative that was made up of a regional hospital, two-three districts/other hospital, four health centers, and eight dispensaries. There were initially three collaboratives—one in each of the three regions. Classroom training was conducted for each collaborative at the same time in the three regions.

Every quarter PQITs from each collaborative were brought together to present and share results of the improvement activities.

Columns were introduced in the Health Management Information System (HMIS) registers to document all children coming to the health facility with fever and the duration of the fever. The child was identified to have fever by history or felt hot at the time of the visit, or had a temperature  $\geq 38.5^{\circ}\text{C}$ . Treatment received was registered in HMIS register number 5.

All PQITs worked on five facility-based improvement objectives as follows:

1. Ensure all under-fives with fever receive correct treatment
2. Ensure all under-fives with fever are tested with malaria rapid diagnostic tests or microscopy

3. Ensure health facilities have no stock-out of essential medicines and supplies
4. Ensure healthy facilities have adequate information to guide decision making
5. Ensure all under-fives with fever are seen by a skilled provider within 24 hours of onset of fever

### III. RESULTS

Tables 1-3 summarize the Tibu Homa Program's results in terms of region and district coverage and reach of training activities.

**Table 1: Region and District Coverage to Date**

Region	Facility level	Community level	
	District	District	Ward
Kagera	Misenyi	Misenyi	Kilimilile, Kasambya
	Muleba	Muleba	Kasharunga, Gwanseri
	Karagwe, Ngara, Biharamuro, Bukoba Urban, Bukoba Rural and Kyerwa		
Mwanza	Sengerema	Sengerema	Mwalubuhi, Katwe
	Nyamagana	Nyamagana	Igoma, Mkolani
	Magu, Misungwi, Kwimba, Ukerewe, and Ilemela		
Mara	Musoma Rural	Musoma Rural	Butiama, Bisumwa
	Tarime	Tarime	Muriba, Susuni
	Rorya, Serengeti, Bunda, and Musoma Urban		
Geita	Geita MC	Geita	Kalangarare, Katoro
	Geita DC, Mbogwe, Chato, Bukombe and Nyanwale		
Shinyanga	Shinyanga MC		
	Kishapu	Kishapu	Kishapu, Binambiyu
Simiyu	Maswa DC	Maswa	Buchambi, Shishiyu
	Maswa DC		
	Bariadi TC and Bariadi DC		

**Table 2: Tibu Homa Program Training Accomplishments through March 2014, By Facility, Community, Cadre**

Facility/Cadre	Period		% of health facilities covered
	Oct 12 - Sept 13	Oct 11 - Mar 14	
Hospitals	41	47	87.2%
Health Center	49	68	50%
Dispensary	107	286	25%

Facility/Cadre	Period		% of health facilities covered
	Oct 12 - Sept 13	Oct 11 - Mar 14	
Total H/Facilities	197	395	29.8%
HCWs	1085	1279	
Clinical Mentorship	148	176	
CHW	166	166	
Medicine Therapeutic committees	50	70	

**Table 3: Tibu Homa Training Activities**

TIBU HOMA PROGRAM	HEALTH FACILITY (PQIT)
Between 2011 and March 2014: Trained 1279 HCWs in updated case management guidelines, using an approach that combines QI methods and standardized case management; formed 183 health facility PQITs in three regions.	Redesigned Case Management flow maps that resulted in improving clinic efficiency
Between 2011 and March 2014: Trained and mentored 267 QI coaches, logistic and clinical mentors among the R/CHMTs.	Improved compliance to case management guidelines (IMCI and RCM)
Conducted monthly coaching and mentorship in collaboration with R/CHMT	Improved diagnosis of malaria and other causes of fever
Conducted 3 learning sessions	Improved health facility stocks of essential medicines and supplies
Conducted 2 harvest and synthesis workshops	Improved health information system and using data for decision making
In the year 2013, prepared a change package	

## IV. DISCUSSION

Improving health care workers' performance is critical for putting evidence-based interventions into practice. This can be achieved through classroom trainings but most important of all on-the-job training.

Selection of participants targeted for training should be done carefully by involving Regional Medical Officers (RMOs), District Medical Officers (DMOs), health facility management, and the rest of the health care workers. Those identified should be informed that they will be expected to train the rest of the health care workers after receiving the training. On-job-training should be included in the health facility routine activities through case reviews/presentations and death audits.

Improving compliance to standard guidelines very much depends on a number of factors, such as health care worker performance, limited coverage of IMCI within the Health Information System, lack of recording forms, inadequate human resources, lack of IMCI guidelines and job aids, lack of IMCI content in routine supervision, availability of medicines and supplies, and social and economic factors of families with sick children.

Health facilities with functional multidisciplinary PQITs have been found to address most of these problems by continuously applying quality improvement methods and testing and implementing practices that have been proven to bring the expected results. Such health

facilities have implemented new patient flow maps that reduce patient consultation times; members of PQITs are assigned roles of monitoring to ensure adequate patient information documentation; availability of guidelines and job aids in consultation areas has increased; monitoring stocks of essential medicines and supplies has improved, including pulling stocks through correct filling; and timely submission of recording and request (R&R) forms has improved. Facilities have also purchased medicines using other sources of funding (including from the private sector) and are collecting, analyzing, sharing results, and using data to plan for further improvements every month.

Functional PQIT teams are those who have support from the health facility management by including their work plans into health facility and Comprehensive Council Health Plan budgets, absorbing such activities into routine health facility services, and making available patient files/OPD cards and improving record keeping.

At the level of R/CHMT, including quality improvement, logistic, and clinical mentorship in the regular supportive supervision visit has helped to improve case management when compared to health facilities receiving conventional supervision (THP assessment study).

THP has observed that faster and improved case management is associated with internal and external on-the-job training and regular supportive supervision/mentorship. Similar observation was documented in the Uganda study.

THP has also observed that using a collaborative improvement method where health facility teams come together to present and share improvement results have been associated with shared learning and scaling up best practices and overall rapid improvement.

## V. BIBLIOGRAPHY

Armstrong SJR, Adam T, Mshinda H, Masanja H, Kabadi G, Mukasa O, et al. Effectiveness and cost of facility-based Integrated Management of Childhood Illness (IMCI) in Tanzania. *Lancet* 2004; 364: 1583-94 doi: [10.1016/S0140-6736\(04\)17311-X](https://doi.org/10.1016/S0140-6736(04)17311-X) pmid: [15519628](https://pubmed.ncbi.nlm.nih.gov/15519628/).

Bryce J, Victora CG, Habicht JP, Vaughan JP, Black RE. The multi-country evaluation of the integrated management of childhood illness strategy: lessons for the evaluation of public health interventions. *American Journal of Public Health*. 2004; 94:406–15.

Bryce J, Victora CG, Habicht J-P, Black RE, Scherpbier RW, Multi-Country Evaluation (MCEITA).. Programmatic pathways to child survival: results of a multi-country evaluation of Integrated Management of Childhood Illness. *Health Policy Plan* 2005; 20: i5-17 doi: [10.1093/heapol/czi055](https://doi.org/10.1093/heapol/czi055) pmid: [16306070](https://pubmed.ncbi.nlm.nih.gov/16306070/).

Duke T, Kelly J, Weber M, Campbell H, Hospital Care of Children in developing Countries: clinical guidelines and the need for evidence. *J Trop Peadiatr*. 2005;52(1):1-2

Kiplagat A, Musto R, Mwizamholya D, Moron D. Factors influencing the implementation of integrated management of childhood illness (IMCI) by healthcare workers at public health centers & dispensaries in Mwanza, Tanzania. *BMC Public Health* 2014, 14:277 doi: [10.1186/1471-2458-14-277](https://doi.org/10.1186/1471-2458-14-277).

Nolan T, Amgos P, Cunha A J et al. Quality of hospital care for seriously ill children in less developed counties. *Lancet* 2001; 357(9250):106-110

Pariyo GW, Gouws E, Bryce J, Burnham G, Uganda IMCI Impact Study Team.. Improving facility-based care for sick children in Uganda: training is not enough. *Health Policy Plan* 2005; 20: i58-68 doi: [10.1093/heapol/czi051](https://doi.org/10.1093/heapol/czi051) pmid: [16306071](https://pubmed.ncbi.nlm.nih.gov/16306071/).

Reyburn H, Mwakasungula E, Chonya S, Mtei F, Bygbjerg I, Poulsen A, et al., et al. Clinical assessment and treatment in paediatric wards in the north-east of the United Republic of

Tanzania. *Bull World Health Organ* 2008; 86: 132-9 doi: [10.2471/BLT.07.041723](https://doi.org/10.2471/BLT.07.041723) pmid: [18297168](https://pubmed.ncbi.nlm.nih.gov/18297168/).

Rowe AK, de Savigny D, Lanata C, Victora CG. How can we achieve and maintain high-quality performance of health care workers in low-resource settings? *Lancet* 2005; 366: 1026-35 doi: [10.1016/S0140-6736\(05\)67028-6](https://doi.org/10.1016/S0140-6736(05)67028-6) pmid: [16168785](https://pubmed.ncbi.nlm.nih.gov/16168785/).

United Republic of Tanzania. Baseline survey on quality of paediatric care in Tanzania. November 2010. Dar es Salaam: Ministry of Health and Social Welfare. 2011.

Walter ND, Lyimo T, Skarbinski J, Metta E, Kahigwa E, Flannery B, et al. Why first-level health workers fail to follow guidelines for managing severe disease in children in the Coast Region, the United Republic of Tanzania. *Bulletin of the World Health Organization* 2009; 87:99-107.

WHO. Management of the child with a serious infection or severe malnutrition: guidelines for care at the first-referral level in developing countries. Geneva: WHO; 2000.



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