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TANZANIA

CASE STUDY

Saving children's lives in Mwanza Region

Health facilities are correctly managing fever in children under five in Tanzania



Photo credit: Agnes Sebastian, URC

Mwanza Region is one of three regions in northern Tanzania that suffers from a high prevalence of under-five mortality, higher than the national average. Children under five suffer from the lack of child-survival interventions, including malaria-control efforts in the region. This case study shows the gains made by the Tibu Homa Project supported health facilities in the region, illustrating the need for a combination of technical support in the form of supportive supervision and mentorship and training in case management and quality improvement to reduce mortality of children under five with severe febrile illness.

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Background

Mwanza Region is situated along Lake Victoria in the northern part of Tanzania. This is a vibrant city that draws activities and trade from fishing, tourism, and a high level of business. Unfortunately, it is also a region with a high under-five child mortality rate. While the national under-five mortality rate declined from 112 per 1000 live births in 2003–2004 to 81 per 1000 births in 2010 (Tanzania Demographic Health Survey of 2010), the rate for the Lake Zone is higher than the national average at approximately 120 per 1000 live births. This high under-five mortality rate in the Lake Zone is closely linked to the lack of successful child-survival interventions. The top ten diseases that affect children under five are malaria, acute respiratory infection (ARI), urinary tract infection (UTI), skin infections, diarrhea, pneumonia, ear infections, eye infections, schistosomiasis, and sexually transmitted infections.

In March 2011, the USAID Diagnosis and Management of Severe Febrile Illness Program (Tibu Homa—“Treat Fever” in Kiswahili) began working with the Tanzanian Ministry of Health and Social Welfare (MoHSW) to reduce morbidity and mortality from severe febrile illness among children under five. Tibu Homa, a five-year, USAID-funded project works by increasing proper diagnosis and treatment of febrile illness cases in the Lake Zone. Specifically, the project seeks to increase availability of and accessibility to essential facility-based curative and preventive child health services; ensure sustainability of critical child health activities; and increase linkages within the community to promote healthy behaviors.

In Mwanza Region, Tibu Homa is working with health care facilities—hospitals, health centers, and dispensaries—in all of its eight districts (Geita, Ilemela, Kwimba, Magu, Misungwi, Nyamagana, Sengerema, and Ukerewe) to address key issues related to severe febrile illnesses of children.

Problem Analysis

Febrile illness is a common problem among children under five in the Lake Zone and may be caused by malaria, among other childhood illnesses. Malaria treatment in children under five is mostly based on clinical diagnosis. According to the Tibu Homa Draft Baseline Assessment Report (April 2012), most healthcare workers did not assess clinical signs among children with fever, thus treating febrile illness based on reported symptoms. This is contrary to the national Malaria Medium-Term Strategic Plan targets being implemented to ensure 80% of malaria patients are diagnosed and treated with effective antimalarial medicines (Artemisinin Combined Therapy, or ACT) within 24 hours of onset of fever.

Improvement Approaches

Over the past three years, Tibu Homa staff have provided technical support to health facility managers and staff to improve case management of malaria and other related febrile illnesses and increase availability and accessibility of effective medicines and diagnostics, including:

- Case management training using Integrated Management of Childhood Illness (IMCI) algorithms to recognize, diagnose, and treat children under five according to national policy, as well as to ensure that all under-fives with fever are seen by a skilled provider within 24 hours of onset of fever.
- Supply chain management and logistics mentorship training—understanding the pull and push system of requesting medicines and supplies from the Tanzanian Medical Stores Department, which involves strict records and tracking consumption of medicines and medical supplies over time in order to make correct and timely orders.
- Improving communication between health facilities and their respective district medical officers and the Tanzanian Medical Stores Department.
- Quality improvement training—supporting health management teams to develop pediatric quality improvement teams (PQITs) to address root causes that hinder overall provision of quality of health services for children.
- Supportive supervision and mentorship—started as a monthly activity, this is now being done on a quarterly basis. Activities include regular visits to view facility progress on case management, prevent stock-outs of medicines and medical supplies, and quality improvement. Supportive supervision and mentorship is conducted with regional and council health management teams, which often comprise a logistics mentor, a clinical mentor, quality improvement personnel, and a supervisor. Health facility staff who have received Tibu Homa trainings are encouraged to mentor their peers and are also encouraged through on-the-job training.

Results

Assessments of these facilities in Mwanza Region have revealed marked improvements overall in providing quality health-care services.

Established and strengthened PQITs make changes happen

The Bupandwa Dispensary PQIT is led by Clinical Officer In-Charge Deonatus Lugangizya and comprises an enrolled nurse, a health officer, and two medical attendants. The dispensary currently serves a population of 18,377 people, of whom 647 are above one year of age (344 male, 303 female).

Improved patient flow maps to provide quality of service

Sengerema Health Centre is a government health facility that serves a large population of 31,582 people from three villages: Nyatukala, Ibisabageni, and Isungang'holo. After staff training provided by the Tibu Homa team, the health center's patient flow map was redesigned to better accommodate the number of patients it serves. This involved:

1. Placing a registration point for children under five at reception, which is handled by a permanent staff member.
2. Establishing a functional triage system for evaluating the state of the child; service cards showing the priority level of services needed are issued to the children's caretakers keep track of their needs as they move through the center.
3. Taking preliminary vital information such as weight and body temperature and proceeding to see the Clinical Officer in a timely manner.

Other interventions include providing strict counselling at the outpatient department and when dispensing medicine, as well as advising caretakers to return for follow-up if necessary. It has been observed that during harvest seasons, caretakers do not return for further checkup as advised. The health center's PQIT meets on a monthly basis to review progress made and address challenges. The center conducts outreach services in communities in partnership with local partners.

Table 1: Service Area Target Population — Sengerema Health Centre 2014

	Under 1 year	Under 5 years	Under 15 years	WBA 15 – 49 years	Above 60 years	Total Population
Nyatukala	448	2,122	5,574	3,528	782	13,706
Ibisabageni	458	1,983	5,409	3,684	878	14,719
Isungang'holo	113	539	1,446	693	73	3,157
Total	1,019	4,644	12,429	7,905	1,733	31,582

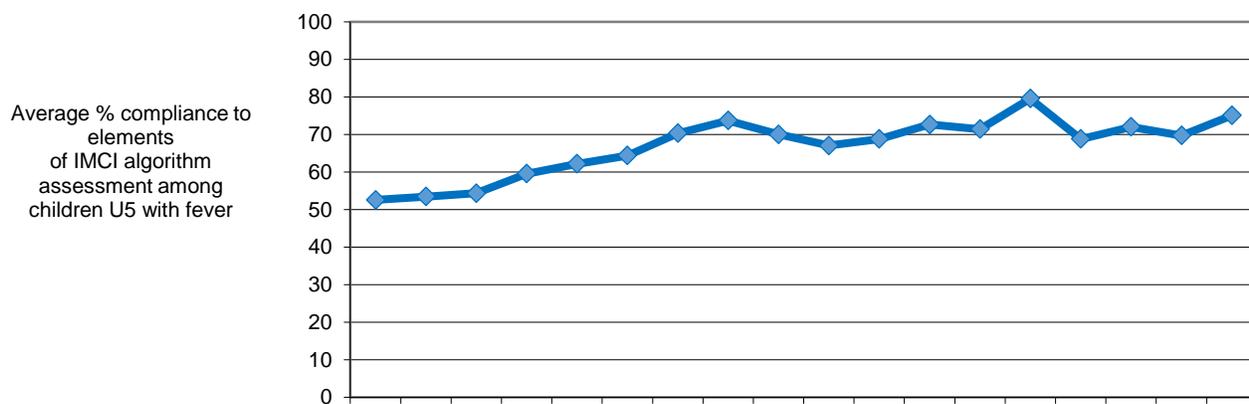
Improved compliance to IMCI standards

Overall, the average percentage of compliance to elements of the IMCI assessment algorithm among children under five with fever in the Tibu Homa-supported health facilities in Mwanza has improved, from 53% in Jan 2013 to 75% in June 2014 (see Figure 1).

Mobilizing communities to do their part

Balatogwa Dispensary is a small health facility located in Sengerema District that serves a population of 3,186 people. Traditional beliefs and superstitions are part of community life, which pose challenges to admitting children under five with fever to the health facility within 24 hours of onset of fever. As of July, 2013, 7% of children under five attending facilities were being seen by a skilled health provider within 24 hours of onset of fever. Mr. Biseko Kimasa, the clinical assistant at the dispensary, and his PQIT members decided to develop intervention strategies. These included conducting monthly community outreach services that provided health education, as well as regular consultations with the clinical officer and nurses on clinic days. Results now show a sharp increase in admissions, from 7% in July, 2013, to 95% June, 2014. Plans are underway to conduct health education awareness sessions at the dispensary on a weekly basis; use radio campaigns; engage Ward Development Committees (WDCs) to mobilize communities; and build internal staff capacity.

Figure 1: Average % compliance to elements of IMCI algorithm assessment among children under 5 with fever in 67 sites, January 2013 – June 2014



	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
# of elements correct for children U5 treated assessed and treated using IMCI algorithm	2353	2071	2784	3583	3547	3472	3968	4130	3865	3979	4068	4065	3821	4716	3948	3800	3729	3986
# of elements of IMCI algorithm for treatment of children U5 assessed in the last month	4474	3872	5122	6014	5702	5390	5640	5600	5518	5932	5910	5594	5348	5926	5738	5276	5346	5308
% of elements of IMCI algorithm correctly completed for children U5	53	53	54	60	62	64	70	74	70	67	69	73	71	80	69	72	70	75
# of Sites Reporting	53	50	65	66	64	64	65	65	67	66	67	64	64	67	65	65	64	65

Data Source: Patient records

Sampling Method: Random sample of 10 IPD and 10 OPD records

Table 2: Staff Positions at Balatogwa Dispensary as at October 2014

No.	Category	PQIT Position
1	Clinical Assistant	Chairperson
2	Enrolled Nurse	Secretary
3	Medical Attendant	Time Keeper
4	Medical Attendant	Medicine Store Keeper
5	Medical Attendant	Triage Nurse
6	Medical Attendant	Member
7	Medical Attendant	Member

Lessons Learned

- Building health care workers' capacity is vital to improving the quality of service provided by health facilities. Regular supportive supervision and mentorship does provide on-the-job training to ensure compliance with IMCI guidelines and national policy.
- Sustainability of gains is achievable when health facilities work together as teams and when communities are made aware of health services and their benefits.