







Tanzania Child Health Market Description

Co-hosted by the Private Sector Engagement subgroup of the Child Health Task Force





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IMCI Analysis of Seven Countries Presentation (SHOPS Plus, Abt Associates, USAID) - February 2, 2021



How well do public and private health facilities adhere to Integrated Management of Childhood Illnesses (IMCI) guidelines?

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CHILD HEALTH SERVICES

Over half of caregivers seek care for children from private sector sources.



- Care-seeking destination: 51% seek treatment/advice from the private sector; 45% of caregivers seek treatment/advice from public sector
- Most private sector care seeking occurs in nonclinical settings
- Care seeking destination patterns are relatively similar across wealth quintiles
- **Caregivers may differentiate** where they go based on perceived severity or previous experience with illness (Haroun et al, 2022), and so may not expect or seek screening in nonclinical settings

CHILD HEALTH SERVICES

Adherence to Integrated Management of Childhood Illness Guidelines

- Adherence to IMCI protocols in Tanzania is poor, including in the private sector.
 - **Cough**: 67% of children were correctly assessed and treated
 - Fever: 34% of children were correctly assessed and treated
 - **Diarrhea**: 25% of children were correctly assessed and treated
 - Acute Malnutrition: 3% of children were correctly assessed
 - Immunization Status: 39% of children were correctly assessed

ASSESS, CLASSIFY AND IDENTIFY TREATMENT

RAPIDLY APPRAISE ALL WAITING INFANTS.

- ASK THE MOTHER WHAT THE YOUNG INFANT'S PROBLEMS ARE.
- Determine whether this is an initial or follow-up visit for this problem
- If a follow-up visit, use the follow-up instructions.
- If an initial visit, assess the young infant as follows: USE ALL BOXES THAT MATCH THE INFANT'S SIGNS AND SYMPTOMS TO CLASSIFY THE ILLNESS.

CHECK FOR POSSIBLE SERIOUS BACTERIAL INFECTION, VERY SEVERE DISEASE, PNEUMONIA OR LOCAL BACTERIAL INFECTION.

			SIGNS	CLASSIFY	(Urgent pre-referral treatment is shown in bold.)
ASK: • Is the infant having difficulty in feeding? • Has the infant had convulsions (fits)?	LOOK AND FEEL: • Count the breaths in 1 minute. Repeat the count if it is 60 or more breaths per minute. • Look for severe chest indrawing. • Measure axillary temperature. • Look at the young infant's movements. If the infant's second as the mother	Classify ALL YOUNG INFANTS	Any one or more of the following signs: • Not able to feed at all or not feeding well or • Convulsions or • Severe chest indrawing or • High body temperature (38°C ⁺ or above) or • Low body temperature (less than 35.5°C ⁺) or • Movement only when stimulated or no movement at all or • Fast breathing (60 breaths per minute or more) in infants less than 7 days old	POSSIBLE SERIOUS BACTERIAL INFECTION or VERY SEVERE DISEASE	→ Give first dose of intramuscular antibiotics. → Treat to prevent low blood sugar. → Advise the mother how to keep the infant warm on the way to the hospital. → Refer URGENTLY to hospital. OR → If referral is REFUSED or NOT FEASIBLE, treat in the climic until referral is feasible. (See chart on p. 13)
	to wake him/her. - Does the infant move on his/her own? If the infant is not moving, genthe stimulate him or her.		Fast breathing (60 breaths per minute or more) in infants 7–59 days old	PNEUMONIA	 → Give oral amoxicillin for 7 days. → Advise the mother to give home care. → Follow up in 3 days.
	– Does the infant move only when stimulated but then stops? – Does the infant not move at all? Look at the umbilicus. Is it red or draining pus?		Umbilicus red or draining pus Skin pustules	LOCAL BACTERIAL INFECTION	 → Give amoxicillin for 5 days. → Teach the mother how to treat local infections at home. → Advise the mother to give home care. → Follow up in 2 days
* Thresholds based on ax	Look for skin pustules.		No signs of bacterial infection or very severe disease	INFECTION UNLIKELY	→ Advise the mother on giving home care to the young infant.

MANAGEMENT OF THE SICK YOUNG INFANT AGED UP TO 2 MONTHS 1

Source: WHO. Management of the sick young infant aged up to 2 months: Chart booklet

Approach to Child Health Market Description





KEY TARGETS

Tanzania is showing mixed progress towards achieving key sustainable development goals related to child health.

	INDICATORS	SDG TARGET	PROGRESS	STATUS
IG 3.2 TALITY	Neonatal mortality	<12 deaths per 1,000 live births	24 ¹	Major challenges remain
SD MOR	Under 5 (U5) mortality	<25 deaths per 1,000 live births	43 ¹	Significant challenges remain
SDG 3.B	Surviving infants who received 2 WHO- recommended vaccines	100%	84% ²	Significant challenges remain
SDG 2.2	Stunting	10.4%	30% ¹	Major challenges remain
	Wasting	<5%	4% ¹	Achieved

- Tanzania is off track for achieving Sustainable Development Goals (SDGs) related to neonatal and under 5 mortality.
- The Government is committed to addressing deaths and has prioritized the below activities to accelerate progress³:
 - Improving NICU premises
 - Ensuring availability of functioning NICU equipment
 - Improving skills/competencies of HRH in neonatal care
 - Ensuring availability of relevant Guidelines/SOPs
 - Maintenance of cost-effective interventions (i.e., immunizations, integrated management of childhood illnesses, etc.)

Use/Need and Demand for Child Health Services

U5 MORTALITY

Under five mortality has decreased significantly over the last two decades, while the rate of decline in infant and neonatal mortality has been slower.



- Tanzania has made significant improvements in child health over the last two decades
 - U5 mortality decreased from 147 (in 1999) to 43 deaths per 1,000 live births (in 2022)
 - Infant mortality decreased from 99 (in 1999) to 33 deaths per 1,000 live births (in 2022)
 - Neonatal mortality rate has decreased at a slower rate, and currently stands at 24 deaths per 1,000 live births.
- The notable decreases in under five mortality are attributed to a number of high impact interventions and improvements to quality of care including:
 - Increased antenatal care (ANC), skilled delivery care and postnatal care (PNC), early initiation of breastfeeding and exclusive breastfeeding practices
 - Accelerated introduction of new life saving vaccines and availability of services and commodities to diagnose and treat malaria, pneumonia and diarrhea¹

U5 MORTALITY

Neonatal deaths account for approximately 40% of under five deaths in Tanzania.



- 40% of U5 deaths in Tanzania occur in the first 28 days of life.
- Preterm birth complications (33%), Birth asphyxia and birth trauma (27%), acute respiratory infections (13%) and neonatal sepsis (6%) are among the leading causes of neonatal death
- Interventions directed at the mother to ensure a health pregnancy can impact the leading causes of neonatal deaths in Tanzania

Source: I.WHO Global Health Observatory. Estimated deaths by cause, sex, and WHO member state. 2019; Lancet: Small Vulnerable Newborns May 2023.

U5 MORTALITY

Acute respiratory infections, diarrhea and malaria account for nearly 50% of post-neonatal under 5 deaths in Tanzania.



 60% of U5 deaths occur after 28 days of life

- Leading causes of death after the neonatal period include: acute respiratory infection (17%), diarrhea (15%), malaria (14%), injuries (12%)
- Adherence to integrated management of childhood illness (IMCI) protocols and ensuring the availability of and access to key commodities including: amoxicillin dispersible tablet (pneumonia); ACTs, ITNs and mRDTs (malaria); and ORS/Zinc (diarrhea) could impact the leading causes of post-neonatal, under five deaths in Tanzania

NUMBER OF

ANNUAL U5

DEATHS (2021)



105,6941

Leading causes of under 5 death are common, treatable illnesses



Source: TDHS Key Indicator Survey 2022; WHO Global Health Observatory. Estimated deaths by cause, sex, and WHO member state. 2019

IMMUNIZATION

Tanzania has made little progress in increasing vaccination rates among children over the last two decades. 25% of children age 12-23 months are not fully vaccinated with basic antigens.



IMMUNIZATION

Tanzania Immunization Schedule (basic antigens)					
BCG (bacillus Calmette-Guérin) for tuberculosis	At birth				
Rotavirus I-valent	At weeks 6 and 10				
DTwP-Hib-HepB	At weeks 6, 10, and 14				
Pneumococcal vaccine (PCV 13) and oral polio vaccine	At weeks 6, 10, and 14				
Inactivated polio vaccine (IPV) with OPV 3	At 14 weeks				
Measles and rubella vaccine (MR I and 2)	At 9 and 18 months				

- Vaccination is one of the most cost-effective interventions implemented to prevent diseases, especially among children.
- 75% of children age 12–23 months are fully vaccinated with the basic antigens.
- 2% of children age 12–23 months have received no vaccinations.
 - Vaccine coverage varies across zones, with higher coverage in Central, Southern Highlands and Eastern zones and lower coverage in Western zones.
 - Most unvaccinated children come from households in the lowest wealth quintiles with mothers who have lower educational attainment

PNEUMONIA

Approximately 21% of children with symptoms of acute respiratory infection (ARI) are not taken to a health facility for advice or treatment.



U5 CHILDREN WITH ARI FOR WHOM ADVICE OR TX WAS SOUGHT IN 2022

I.5% of U5 children showed symptoms of acute respiratory infection in the two weeks before the TDHS 2022

- 79% of children with ARI symptoms were taken to a health facility or provider for advice or treatment
- The percentage of children with ARI symptoms for whom advice or treatment was sought is higher in urban areas (83%) compared to rural areas (77%)

FEVER

Approximately 22% of all children with fever are not taken to a health facility or provider for advice or treatment.



OR TREATMENT WAS SOUGHT IN 2022



- 11% of U5 children exhibited fever in the two weeks before the TDHS 2022
- 78% of children with fever were taken to a health facility or provider for advice or treatment and 50% had blood taken.
 Differences in care seeking for children by residence mirror care seeking for pneumonia. The percentage of under 5 children with fever symptoms for whom advice or treatment was sought is higher in urban areas (83%) compared to rural areas (76%)
- Of the children who exhibited fever, 35% received an antimalarial/ACT in 2022 which is a decline from 50% in 2015. Improved differential diagnosis of fever may account for decreasing use of antimalarial/ACTs over time. (Not every fever is malaria.)

MALARIA

DIARRHEA

Among children with diarrhea who were taken to a health facility or provider for advice or treatment, approximately 61% <u>did not</u> receive oral rehydration salts.



- 9% of U5 children had diarrhea in the two weeks before the TDHS 2022
- Care and treatment seeking for U5 children with diarrhea has increased over time, with 64% of children taken to a health facility or provider for advice or treatment in 2022 compared to 47% in 2005.
- Care and treatment seeking for children with diarrhea is significantly lower than care and treatment seeking for children with ARI (pneumonia) and fever.
- Only 39.1% of U5 children with diarrhea received oral rehydration salts (ORS). There was no difference in urban vs. rural residence in receiving ORS, but children with mother's with less education and from poorer households were more likely to receive ORS than children in wealthier households.

NUTRITION

Children who suffer from stunting and wasting are at higher risk for illness, health complications and death. Approximately 30% of U5 children in Tanzania are stunted while 4% are wasted.



⁻⁻⁻⁻Stunted ----Wasted ----Overweight

- The percentage of children under age 5 who are stunted has decreased from 44% in 2005 to 30% in the TDHS 2022. The percentage of children who are wasted or overweight has remained largely unchanged over the last two decades.
- While Mainland Tanzania has higher rates of stunting (30%) compared to Zanzibar (18%), the rates of wasting in U5s is higher in Zanzibar (8.2% compared to 3.2% in Mainland)
- The regions in Zanzibar with the highest rates of wasting include: Mjini Magharibi (10.5%), Kaskazini Unguja (10%), Kaskazini Pemba (7.7%), followed by regions on Mainland: Rukwa (8.3%), Pwani (6.2%), and Tanga (5.6%).
- Higher rates of stunting and wasting are found in males (stunting: 33.3%, wasting: 4.2%) compared to females (stunting: 26.6%, wasting: 2.4%); Wasting rates are also higher among children with mothers with no education (4.7%) or living in households in the lowest wealth quintile (4.3%)

INFANT AND YOUNG CHILD FEEDING

Early infant feeding practices can have life-long impact on the health and well-being of both mother and child. In Tanzania, the majority of infants are breastfed within I hour of birth and exclusively breastfed for the first 6 months of their lives.







- Early initiation of breastfeeding, within 1 hour of birth, protects the newborn from acquiring infections and reduces the risk of diarrhea and newborn death.
- 70% of children born in the 2 years before the TDHS 2022 engaged in early initiation of breastfeeding.
- The percentage of infants who are exclusively breastfed has increased over time, from 32% in 1999 to 64% in the 2022 DHS.

SNAPSHOT: KEY CHILD HEALTH MEDICINES

CATEGORY	ANTIBIOTIC	ANTIDIA	RRHEAL	ANTIMALARIAL		
	AMOX DT			(for uncomplicated malaria)	(for malaria in neonates)	
PRODUCT	250mg dispersible, scored	ORS	20mg Tablet	ARTEMETHER + LUMEFANTRINE 20/120mg	PARENTERAL ARTESUNATE 60mgO	
ON TANZANIA ESSENTIAL MEDICINES LIST? (Y/N)	YES	YI	ES	YES	YES	
LOWEST LEVEL OF HF USE	DISPENSARY	DISPENSARY	DISPENSARY	DISPENSARY	DISPENSARY	
ON ADDO MEDICINE LIST? (Y/N)	NO	YES (GENERAL SALES)	YES (GENERAL SALES)	YES	NO	
GHSC CATALOG (April 2023)	\$0.033 per tab	\$0.77 per sachet	\$0.0144 per tab	n/a	n/a	
MSD CATALOG (2022/2023)	n/a	\$0.08 per sachet \$0.38 per co-pack	\$0.18 per tab (error in catalog?)	n/a	n/a	
# REGISTERED PRODUCTS	8	П	П	29	27	
# LOCAL MANUFACTURER	0	I	I	I	0	



PNEUMONIA





• There are at least 5 registered suppliers for key child health medicines in Tanzania

• Local manufacturing capacity exists in Tanzania for ORS (diarrhea), Zinc (diarrhea) and Artemether + Lumefantrine (malaria)

CHILD HEALTH SERVICES

The availability of key preventative and curative child health services is lowest among private-for-profit health facilities compared to public or FBO/NGO facilities, and less than 50% of all surveyed health facilities had staff trained in IMCI or growth monitoring,

MANAGING AUTHORITY	OFFERS PREVENTATIVE/CURATIVE CARE FOR USs	DIAGNOSIS/TX MALNUTRITION	VITAMIN A SUPPLEMENTATION	IRON SUPPLEMENTATION	ORS AND ZINC FOR DIARRHEA	CHILD GROWTH MONITORING	TX O PNEUMONIA	ADMINISTRATION OF AMOXICILLIN FOR PNEUMONIA	TX OF MALARIA IN CHILDREN	OFFERS CHILD IMMUNIZATION SERVICES	STAFF TRAINED IN IMCI	STAFF TRAINED IN GROWTH MONITORING
PUBLIC	93%	89%	9 2%	82%	79 %	93%	91%	78%	9 2%			
NGO/NFP	73%	67%	73%	63%	73%	73%	73%	73%	73%			
PRIVATE FOR-PROFIT	56%	47%	50%	42%	53%	43%	51%	51%	56%			
FBO	85%	80%	83%	64%	73%	63%	83%	79%	80%			
TOTAL	87%	82%	85%	74%	75%	86%	81%	74%	85%	84%	42%	47%



Emerging Market Constraints

Emerging areas of Child Health Market Underperformance in Tanzania

SKILLS:

- Lack of appropriately skilled HRH to diagnosis and treat common childhood illnesses;
- Lack of training opportunities and on-job mentorship in the private sector;
- Shortage of key HRH to deliver child health services

BUSINESS FINANCING:

- **Insufficient working capital** prohibits private health sector from seeking opportunities to deliver higher quality of care and services (e.g., investing in new equipment and technology; investing in HRH; ensuring reliable availability of medicines, etc.)
- **Poor financial literacy** also inhibits private sector from seeking financing from private sources.
- Commercial banks lack of knowledge of the opportunities in the health sector, and therefore do not have attractive loan products targeted at this sector.

SUPPLY:

- Poor availability of key child health services in the private sector
- Some private health facilities lack critical infrastructure to deliver quality services
- ADDOs serve on the front lines of service delivery particularly to rural communities, but availability of key products may be a challenge due to working capital constraints and poor inventory management;
- **Highly fragmentated market for key products** with many registered products/suppliers (e.g., Alu)



RULES & REGULATIONS: Dissemination and implementation of policies and guidelines in the private sector is a challenge; **Poor regulation and oversight** of the private sector can lead to substandard quality of care (e.g., inappropriate use of medicines, etc.); Lack of clarity in policy (e.g., what products are allowed in ADDOs) leads to confusion among service providers

FINANCING (S):

• A large percentage of child health financing in private sector is through out-ofpocket expenditure, Government insurance (NHIF), with limited financing by private insurance companies.

INFORMATION (D):

• Fragmentation of private sector data leads to limited visibility of the performance of the total market and makes it challenging to understand some of the root causes of inaccessible key products and services

DEMAND:

• Lack of awareness about danger signs and how to appropriately treat common childhood illnesses at both community and provider levels leads to delayed care seeking and inappropriate care/decision-making.

SNAPSHOT: EMERGING ISSUES ACROSS KEY CHILD HEALTH PRODUCTS

PRODUCT		PRELIMINARY INSIGHTS						
PNEUMONIA	AMOXICILLIN DISPERSIBLE TABLET (AMOX DT)	 Limited availability of Amox DT in private health facilities, pharmacies and ADDOs. Lack of clarity among service providers if Amox DT is allowed in ADDOs (not on the currently enforced ADDO Medicines List) Despite that the Tanzania Standard Treatment Guidelines state the first line drug for childhood pneumonia is Amox DT, private providers prefer to prescribe combination therapy (e.g. amox +clav) vs. single drug thrapies The Government is interested in the local manufacture of Amox DT. Market entry barriers such as cost for tech transfer, access to financing, need for a guaranteed market (e.g., public sector procurement) prevent local manufacturers like Zenufa (who produce Amoxicillin tablets) from venturing into this market. 						
DIARRHEA	ORS and ZINC	 Although there are 11 registered suppliers of ORS and Zinc, there is little variety at service delivery points (1-2 products max) Availability of ORS was relatively high at health facilities but use among children with diarrhea is low Community sensitization could be a challenge Health care workers in health facilities are not aware on the management of diarrhea and adherence to standard treatment guidelines Availability of low osmolarity ORS/Zinc co-pack in ADDOs/pharmacies a challenge (low demand due to low palatability) 						
LARIA	ARTEMETHER + LUMEFANTRINE (ALu)	 Many registered suppliers leads to a fragmented market which makes it more challenging for quality manufacturers to compete Rational drug use and adherence to full course of treatment is important to delay drug resistance (with limited new drugs on the horizon) Mosquito that can transmit two malaria parasite species (p. falaciparum and p. vivax) has been documented in Kenya. Need to ensure the availability of medicines to treat malaria caused by p. vivax. 						
MAI	Insecticide Treated Nets (ITN)	 ITN availability is low in certain regions of the country; Regions that have the lowest percentage of households with at least one ITN include: Arusha (49%), Simiyu (52.1%), Njombe (54.8%), Manyara (55.3%), Kilimanjaro (57.3%), and Shinyanga (59.8%). UNICEF and Global Fund validated LLIN manufacturers/suppliers in Tanzania: I) Net Health Limited; 2) Local A–Z Textile Mills,; 3)Vector Health International Limit 						
	MARKET INTEL	 Data visibility into the total market for these products is limited Lack of forecasting/quantification makes it challenging for private sector to anticipate demand (beyond using past sales data to inform decisions) 						

KEY ISSUES

Emerging areas of IMCI underperformance in Tanzania

SKILLS:

- Few providers with IMCI training
- Limited access to training
- High staff turnover
- Episodic, inconsistent oversight and supportive supervision from R/CHMTs

SUPPLY:

- Relatively few private providers have had access to IMCI training or oversight
- Training is largely project-dependent, fragmented
- Training capacity may also be an issue
- In-service versus pre-service emphasis on IMCI training

RULES & REGULATIONS:

- Dissemination and implementation of IMCI guidelines in the private sector is a challenge
- **Poor regulation and oversight** of the private sector can lead to substandard quality of care (e.g., inappropriate use of medicines, etc.);
- Regulations restrict ADDOs from being too "clinical";
- ADDOs face some restrictions on stocking essential products to treat or diagnose common childhood illnesses (e.g., mRDTs, ACTs, amox DT)
- Private providers face few consequences for not implementing IMCI



FINANCING (S):

- Tanzania's health system remains under-resourced and donor dependent
- IMCI can lose out to vertical programs since donor funding is still very focused on specific child health areas (e.g., immunization, malaria, newborn health, nutrition, etc.)
- Current MOH IMCI strategy emphasizes resource-heavy and expensive interventions

INFORMATION (D):

- Data on IMCI are relatively old and/or non-existent
- Data produced by IPs is fragmented and not widely shared (and also, includes little to no private sector data

DEMAND:

- IMCI is not a service that is separately demanded by caregivers
- Existing evidence is that clients' level of satisfaction with quality of care in the private sector clinical settings is already high
- Many caregivers initially seek out care and treatment from ADDOs, pharmacies, or shops

SNAPSHOT: EMERGING ISSUES ACROSS KEY CHILD HEALTH PRODUCTS

SERVICE	PRELIMINARY INSIGHTS
INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS	 A key barrier to IMCI adherence: limited active implementation of IMCI in the private sector, due to several factors: Few providers with training → no knowledge base Limited access to training → prioritization of public sector over private sector High staff turnover→ new knowledge (however its built) decays quickly and/or is hard to retain in facilities Challenges suggest a few potential intervention areas for further consideration: Diffusion of IMCI skills Retention of IMCI skills Digital applications Focus on referrals at lower levels (i.e., pharmacies, ADDOs, etc.) Expanding private sector access to training