

Supplement 2. Characteristics, tuberculosis screening results, and outcomes of 300 severely malnourished hospitalized Malawian children evaluated for pulmonary tuberculosis by Xpert/culture and NIH clinical case definitions

	Total N = 300 (%)		NIH clinical case definitions							
			Confirmed TB N = 2 (%)		Probable TB N = 20 (%)		Possible TB N = 197 (%)		Unlikely TB N = 81 (%)	
Baseline Demographics										
<u>Gender</u>										
Male	146	(48.7)	1	(50.0)	12	(60.0)	99	(50.3)	34	(42.0)
Female	154	(51.3)	1	(50.0)	8	(40.0)	98	(49.7)	47	(58.0)
<u>Age in months, median (IQR)</u>	18.5	(12.1-25.6)	15.5	(11.2-19.9)	15.6	(11.0-24.9)	18.0	(12.2-24.2)	20.2	(13.5-28.2)
<u>HIV status¹</u>										
Infected ²	52/295	(17.6)	0	(0.0)	5	(25.0)	39/192	(20.3)	8	(9.9)
Exposed ³	35/295	(11.9)	1	(50.0)	5	(25.0)	25/192	(13.0)	4	(4.9)
Unexposed	208/295	(70.5)	1	(50.0)	10	(50.0)	128/192	(66.7)	69	(85.2)
<u>Severe malnutrition criteria</u>										
WFH z-score \leq -3SD ⁴	61/127	(48.0)	1/1	(100.0)	7/13	(53.8)	42/84	(50.0)	12/29	(41.4)
WFH z-score, median (IQR)	-2.9	(-3.8, -2.2)	-2.2	N/A	-3.2	(-3.7, -2.8)	-3.0	(-3.7, -2.3)	-2.6	(-3.9, -1.8)
MUAC \leq 115 mm	193	(64.3)	2	(100.0)	14	(70.0)	131	(66.5)	46	(56.8)
Edema	173	(57.7)	1	(50.0)	7	(35.0)	113	(57.4)	52	(64.2)
TB Screening										
<u>Clinical signs/symptoms suggestive of TB</u>										
Severe malnutrition ⁵	300	(100.0)	2	(100.0)	20	(100.0)	197	(100.0)	81	(100.0)
Cough \geq 2 weeks ⁶	36	(12.0)	2	(100.0)	5	(25.0)	26	(13.2)	3	(3.7)
Lethargy/ Reduced playfulness ¹	269/299	(90.0)	2	(100.0)	17	(85.0)	177/196	(90.3)	73	(90.1)
Fever > 1 week	78	(26.0)	2	(100.0)	7	(35.0)	51	(25.9)	18	(22.2)
<u>TB exposure</u>										
Contact ¹	48/297	(16.2)	1	(50.0)	8	(40.0)	37/195	(19.0)	2/80	(2.5)
TST \geq 5 mm ¹	40/287	(13.9)	1	(50.0)	10/19	(52.6)	29/189	(15.3)	0/77	(0.0)
<u>CXR consistent with TB¹</u>	48/299	(16.1)	2	(100.0)	20	(100.0)	26/196	(13.3)	0	(0.0)
Outcomes										
<u>Microbiologic confirmation</u>										
Smear positive	1	(0.3)	1	(50.0)	0	(0.0)	0	(0.0)	0	(0.0)
Culture positive	2	(0.7)	2	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)
Xpert positive	3	(1.0)	2	(100.0)	0	(0.0)	1	(0.5)	0	(0.0)
<u>Prescribed anti-TB therapy</u>	132	(44.0)	2	(100.0)	16	(80.0)	97	(49.2)	17	(21.0)
<u>Returned for follow-up</u>	134/271	(49.4)	0	(0.0)	14/19	(73.7)	85/176	(48.3)	35/74	(47.3)
<u>Response to anti-TB therapy at follow-up^{7,8}</u>	44/58	(75.9)	0	(0.0)	11/13	(84.6)	33/44	(75.0)	0/0	(0.0)
<u>Death⁹</u>	29	(9.7)	0	(0.0)	1	(5.0)	21	(10.7)	7	(8.6)

Abbreviations: NIH= National Institutes of Health, TB=tuberculosis, IQR=interquartile range, WFH= weight-for-height, SD= standard deviations, MUAC=mid-upper arm circumference, mm = millimeters, TST=tuberculin skin test, CXR=chest radiograph.

¹ N <300 due to missing data.

² HIV infected includes both confirmed HIV infection (50/300) and presumed severe HIV disease (2/300).

³ Includes 6 children who were HIV-exposed but final status pending due to definitive HIV test result pending or were still breast-feeding

⁴ Denominator excludes children with edema, per World Health Organization (WHO) guidelines.

⁵ WHO severe acute malnutrition criteria for children aged 6-60 months: WFH z-score \leq -3 SD, MUAC \leq 115mm, or bilateral pedal edema

⁶ Without response to antibiotics

⁷ Denominator includes only those patients that were started on anti-tuberculosis therapy AND returned for follow-up.

⁸ Resolution of presenting clinical signs/symptoms suggestive of tuberculosis (cough, lethargy/reduced playfulness, fever) and improvement in weight-for-height, edema, or MUAC.

⁹ 1 death occurred prior to 6-week follow-up, all others occurred during hospitalization.