

Complaint category	DIAGNOSIS	ePOCT+ DYN TZ Algo	Excluded by	Referral	TREATMENTS	Follow-up (always includes reasons to return to clinic)	Management	Difference with ePOCT 2014 algorithm (New, Adapted, Same)	Modifications in respect to TZ guidelines: Standard Treatment Guidelines and Essential Medicines List for Children and Adolescents 2018 (STGC 2018, or IMCI 2014 (TZ, IMCI 2020), or IMAI 2009)	In line with Tanzania guidelines and/or IMCI? (YES, Adapted from TZ guidelines), NEW = Not in TZ guideline)	TZ or (IMCI/MAI Guidelines)	Additional references
Universal assessment - malnutrition	Complicated severe acute malnutrition	WFA z-score <-3 (2-5m) OR MUAC <11.5cm (6-59m) OR MUAC for age z-score <-3 (5-14y) OR WFH <-3 z-score (2-59m) AND Medical complication OR (NO Medical complication AND fail appetite test) OR Child deemed too sick for appetite test by provider OR (Appetite test unavailable AND Caregiver reports not feeding well) Medical complication = Danger sign OR Hypoglycaemia <3 mmol/L OR Severe pneumonia OR chest indrawing pneumonia OR Severe cough OR Suspected foreign body in airway OR Severe dehydration OR Severe persistent diarrhoea OR Very severe febrile disease OR Severe malaria OR Complicated prolonged fever OR Severe anaemia OR Severe complicated measles OR severe abdominal condition OR mastoiditis OR severe eye disease OR complicated abscess OR complicated cellulitis OR osteomyelitis/septic arthritis		Yes - urgent	Pre-referral: IV Ampicillin 200mg/kg/day divided in 4 doses for 1 days [50mg/kg/dose four times a day x 1d] IV Gentamicin 7mg/kg/day divided into 1 dose for 1 days [7mg/kg/dose daily x 1d] (If Amp & Gent not available) IV Ceftriaxone 50mg/kg/day divided into 1 dose for 1 days [50mg/kg/dose daily x 1d] Prevent low blood sugar If confirmed hypoglycaemia and unable to drink/feed: Dextrose IV bolus		Refer urgently for inpatient management Keep the child warm Prevent low blood sugar	Adapted	Anthropometric measurements: MUAC and WFI in line with IMCI. Weight for age z-scores (WAZ) added in line with IMCI Tanzania but restricted to children 2-5m since MUAC is not measured in children under 6 months. Clinical signs (bilateral puffy oedema / visible wasting) removed Complicated criteria: presence of any "IMCI medical complication", i.e. danger sign, severe pneumonia, severe dehydration, severe persistent diarrhoea, very severe febrile disease, severe complicated measles, etc. Given the additional granularity of diagnoses in ePOCT+, all other severe diagnoses are also included (suspected meningitis, severe malaria, complicated prolonged fever, severe cough, suspected foreign body in airway). Identification of severe malnutrition/undernutrition in children 6-14 years: WHO proposes BMI (see this et al., 2007). Without height, BMI can not be calculated. MUAC-for-age reference growth curves that accord with WHO standards were developed, and found to be as effective as the WHO BMI-for-age cut-offs for assessing undernutrition as a risk factor for mortality, validated in cohorts from Kenya, Zimbabwe, and Uganda (Mwambi et al., 2017). In Tanzanian adolescents, MUAC was also found to correlate well with BMI, and thus a good method for screening for malnutrition when BMI is not possible (Lilije, Lema, Kaaya, Steinberg, & Baumgartner, 2019).	Adapted	IMCI 2014; IMCI TZ 2020; STGC 2018 p. 81	Clinical signs: found to be rare and inaccurate, missing approximately half or more of children with severe malnutrition (Hamer, Kutum, Jeffries, & Allen, 2004; Mogeni et al., 2011; Tan et al., 2020).
	Uncomplicated Severe acute malnutrition	WFA z-score <-3 (2-5m) OR MUAC <11.5cm (6-59m) OR MUAC for age z-score <-3 (5-14y) OR WFH <-3 z-score (2-59m) AND NO complicated SAM criteria AND Pass appetite test OR (Appetite test unavailable AND mother reports eating well)	Complicated SAM	Yes - to nutrition programme (for above 5y only if MUAC <13.5cm if 5-9y, and <16cm if 10-14y)	PO Amoxicillin 50mg/kg/day divided in 2 doses for 5 days [25mg/kg/dose two times a day x 5d] (If Amox not available) PO Co-trimoxazole 8mg TMP/kg/day divided into 2 doses for 5 days (dosage based on TMP) [4mg/kg/dose two times a day x 5d] If >6 months: RUTF	7days if no nutrition prog	Feeding counselling (by age) Tuberculosis assessment / investigations available in this health facility? (Refer for specialized outpatient investigations: TB assessment) & Tuberculosis assessment at health facility) Refer to nearest nutrition/malnutrition program for malnutrition management	Adapted	As above	Adapted	IMCI 2014	
	Very low weight for age	WFA z-score <-3 (age 6 - 59m)	Complicated / uncomplicated SAM	Yes - to nutrition programme	If fever: PO Amoxicillin 50mg/kg/day divided in 2 doses for 5 days [25mg/kg/dose two times a day x 5d] (If Amox not available) PO Co-trimoxazole 8mg TMP/kg/day divided into 2 doses for 5 days (dosage based on TMP) [4mg/kg/dose two times a day x 5d]		Feeding counselling (by age) Refer to nearest nutrition/malnutrition program for malnutrition management	Adapted	Very low weight for age (WFA) is included as a diagnosis to reflect children with WAZ <-3 but MUAC >11.5cm (those age 6-59 months with <11.5cm = SAM). This aligns with IMCI Tanzania, and Tanzania Standard Treatment Guideline case definition. While this population has a lower 6 month mortality than children with MUAC <11.5cm, they still require nutritional support (Mark Nyati, Khara, Dolan, Garenze, & Brand, 2018), and benefit from antibiotics if febrile (Benkley et al., 2005; Sachdeva et al., 2016; Tan et al., 2020).	Adapted	IMCI 2014, IMCI TZ 2020	
	Moderate malnutrition	WFA z-score -2 to -3 (2-59m) OR MUAC 11.5-12.5cm (6-59m) OR MUAC for age z-score -2 to -3 (5-14y) OR WFH z-score -2 to -3	Complicated / uncomplicated SAM	No		30/7 if feeding problem 7/7	Feeding counselling (by age) No inpatient referral needed: Return to clinic in 30 days for follow up (Refer for specialized outpatient investigations: TB assessment) or Tuberculosis assessment at health facility)	Adapted	Assess the child's feeding Anthropometric measurements - as above	Adapted	IMCI 2014, IMCI TZ 2020	
Universal assessment - anaemia	Severe anaemia	Hb <6g/dL OR Severe (palmar OR conjunctival) pallor AND NO Hb Hb measured in children with: Any pallor, Fever (only criteria for children <5y), Jaundice, SAM, MAM, Very low WFA, Danger sign, Respiratory distress, diarrhoea >= 14 days, HIV, Sickle cell disease, or at health worker discretion (i.e. proposed by health worker not by algorithm)		Yes - urgent	If not Sickle Cell Disease, and not currently taking RUTF: PO Iron 3mg/kg/day in 1 dose for 14 days [3mg/kg/dose daily x14d] If age >12mth and no dose in last 6 months PO Mefendazole (prevention) (Age >=1y) 500mg daily for 1 days	14 days	Refer urgently for inpatient management	Adapted	Constructiv at pallor: added to increase sensitivity of detection of anaemia and for research purposes. Haemoglobin (Hb) measurement: proposed for all children with pallor and syndromes / diagnoses in which anaemia more common, or would affect classification or management - malnutrition (MUAC <12.5cm, WFI and WFA z-score <-2), fever, jaundice, known HIV or sickle cell disease, danger signs, respiratory distress. Hb cut-offs: Based on WHO 2011 classification and agreed by expert panel	Adapted	STGC 2018 p. 114, WHO Haemoglobin concentrations for the diagnosis of anaemia and assessment of severity 2011	Epidemiology: - High global burden of anaemia (32.9%), with East / Southern Africa & children <5 having highest burden (Kassebaum et al., 2014; Nagasato et al., 2019) - Severe anaemia important risk factor for death / severe outcome from infection (Balajagan et al., 2011; Brabin et al., 2001; Calis et al., 2008; Lozano et al., 2012) Rationale for Hb measurement: - Clinical signs perform poorly (Aggarwal et al., 2014; Chalco et al., 2005; Olupot-Olupot et al., 2018) - ePOCT data: systematic Hb testing among febrile children under 5 resulted in 4 fold increase in detection of severe anaemia using Hb vs clinical signs (K. Kellel et al., 2017). Children at highest risk of anaemia and severe outcomes: - Moderate and severe malnutrition (Engdaye et al., 2019; Meku et al., 2018; Moschovis et al., 2018; Ngasa & Mwambi, 2014), malaria (WHO) (Calis, Pihl, et al., 2008; Congyates et al., 2014; Ngasa & Mwambi, 2014), HIV (Calis, Pihl, et al., 2008; Calis, van Hensbroek, et al., 2006; Vobenberg et al., 2004), and fever (Moschovis et al., 2018; Ntenda et al., 2018). Referral / transfusion threshold: - WHO restricts transfusion for stable children to Hb less than 4-6 g/dL (WHO, 2013a). Tanzanian STGs define severe anaemia as <6g/dL, and transfusion thresholds at Hb < 4g/dL, or < 7 g/dL, if signs of cardiac failure (Mait, 2018). - No difference in 6 month clinical outcomes between immediate vs deferred transfusion for children Hb <6 g/dL, but half of the deferred group received transfusion due to clinical severity or drop of Hb <4 g/dL, which justifies clinical surveillance in children with Hb <6g/dL (Mailand et al., 2019).
	Mild/Moderate anaemia	Hb 6 to <10g/dL (2 to 5m) or Hb 6 to <11g/dL (6 to 59m) or Hb 6 to 11 g/dL (5-14y) OR Some (palmar or conjunctival) pallor AND NO Hb	Severe anaemia	Yes - to consider if already on iron supplementation for 32 months			Mild/moderate anaemia counselling No referral. Return for follow up in 14 days Consider outpatient referral if already on iron treatment for more than two month	Adapted	idem	Adapted	idem	Do not withhold iron supplement until end of febrile episode (Gera 2002)

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Universal assessment - danger signs & fever	Central Nervous System Danger Signs	Convulsing now OR Unconscious OR Lethargic OR ≥1 Convulsions in present illness AND (Age <12m or ≥6y OR Convulsion ≥15min OR HIV OR Severe malnutrition)		Yes - urgent	Pre-referral: If convulsing now: PR Diazepam age-based fixed dose (2-6mth = 2.5mg / 6-12mth = 5mg / 13-36mth = 7.5mg / ≥36mth = 10mg) (If Diazepam not available) IM phenobarbital 20 mg/Kg/dose divided into 1 dose for 1 days [20 mg/Kg/dose x daily x 1 dose] Pre-referral: If "CNS danger sign": M/IV Ceftriaxone HD 80-100mg/kg/day divided into 1 dose for 1 days (80-100mg/kg/dose daily x 1 dose) (If Cef not available) M/IV Ampicillin HD 400mg/Kg/day divided in 4 doses for 1 days (100mg/kg/dose four times a day x 1 dose) & (If Cef not available) M/IV gentamicin 7mg/Kg/day divided into 1 dose for 1 days (7mg/kg/dose daily x 1 dose) Prevent low blood sugar If confirmed hypoglycaemia and unable to drink/feed: Dextrose IV bolus / NG sugar water		Keep the child warm Prevent low blood sugar Refer urgently for inpatient management	Adapted	Convulsion criteria: Adapted to account for simple febrile convulsions (see rationale related to diagnosis below). Number and duration of convulsions only asked to those with history of convulsions in this illness and who are not unconscious, lethargic, and are ≥ 12m or <6y of age. Detailed convulsion questions only asked to those that do not meet other danger sign criteria. Unable to drink/breastfeed / vomiting everything: includes a quick check with sp. fluid / breastfeeding provided not unconscious/lethargic/convulsing as per IMCI (in training guidelines, not chartbooklet), integrated in algorithms for severe dehydration and very severe febrile disease. Antibiotics for those with "CNS danger signs" are included to ensure that children without fever but at risk of meningitis / sepsis are treated with antibiotics. CNS danger signs = all criteria other than vomiting everything / unable to drink / breastfeed (these children will receive antibiotics if fever (see very severe febrile disease))	Adapted	IMCI 2014, STGC 2018 p. 34	- Unconscious / Lethargic good predictors of severe disease (Amamburo et al., 2018; Conroy et al., 2015; Mose et al., 2011; Scott, Donoghue, Gieski, Marchese, & Mistry, 2014; van Nassau et al., 2018)
	Very severe febrile disease	Fever AND Danger sign (Convulsing now OR Unconscious OR Lethargic OR (Age >=12m AND Stiff neck AND Difficulty moving head) OR ≥2 Convulsions in present illness OR 1 Convulsion AND (Age <12m or ≥6y OR Severe malnutrition OR Convulsion ≥15min OR HIV OR fever ≥7d OR malaria test positive) OR Vomiting everything (>5y) OR Unable to drink / breastfeed AND Unable to tolerate oral fluid		Yes - urgent	Pre-referral: If convulsing now: PR Diazepam age-based fixed dose (2-6mth = 2.5mg / 6-12mth = 5mg / 13-36mth = 7.5mg / ≥36mth = 10mg) (If Diazepam not available) IM phenobarbital 20 mg/Kg/dose divided into 1 dose for 1 days [20 mg/Kg/dose x daily x 1 dose] Pre-referral: M/IV Ceftriaxone HD 80-100mg/kg/day divided into 1 dose for 1 days (80-100mg/kg/dose daily x 1 dose) (If Cef not available) M/IV Ampicillin HD 400mg/Kg/day divided in 4 doses for 1 days (100mg/kg/dose four times a day x 1 dose) & (If Cef not available) M/IV gentamicin 7mg/Kg/day divided into 1 dose for 1 days (7mg/kg/dose daily x 1 dose) PO Paracetamol 40-80 mg/Kg/day divided into 4 doses x 1 days [10-20mg/kg/dose four times a day x 1d] Prevent low blood sugar If confirmed hypoglycaemia and unable to drink/feed: Dextrose IV bolus		Prevent low blood sugar Refer urgently for inpatient management	Adapted	Fever and any danger sign: in line with IMCI Stiff neck: Only checked if no danger sign present, and not checked in children <12 months as uncommon even in presence of meningitis (note all children with any CNS danger sign are covered for meningitis under diagnosis very severe disease or CNS Danger sign.) Other criteria in STGs for suspected meningitis not all included (also not in IMCI) as either poor sensitivity, specificity or poorly assessed at primary care level (bulging fontanelle, weak cry, irritability) Convulsion criteria: Adapted to account for simple febrile convulsions (see rationale related to diagnosis below). Number and duration of convulsions only asked to those with history of convulsions in this illness and who are not unconscious, lethargic, and are ≥ 12m or <6y of age. Detailed convulsion questions only asked to those that do not meet other danger sign criteria. Unable to drink/breastfeed / vomiting everything: includes a quick check with sp. fluid / breastfeeding provided not unconscious/lethargic/convulsing as per IMCI (in training guidelines, not chartbooklet), integrated in algorithms for severe dehydration and very severe febrile disease.	Yes	STGC 2018 p. 74, IMCI 2014, IMCI TZ 2020	
	Suspected meningitis	Fever AND NO Danger sign AND Age >=5y AND Headache or Neck pain or stiffness AND Stiff neck		Yes - urgent	Pre-referral: M/IV Ceftriaxone HD 80-100mg/kg/day divided into 1 dose for 1 days (80-100mg/kg/dose daily x 1 dose) (If Cef not available) M/IV Ampicillin HD 400mg/Kg/day divided in 4 doses for 1 days (100mg/kg/dose four times a day x 1 dose) & (If Cef not available) M/IV gentamicin 7mg/Kg/day divided into 1 dose for 1 days (7mg/kg/dose daily x 1 dose) PO Paracetamol 40-80 mg/Kg/day divided into 4 doses x 1 days [10-20mg/kg/dose four times a day x 1d] Prevent low blood sugar		Adapted	Stiff neck: Only checked if no danger sign present, and not checked in children <12 months as uncommon even in presence of meningitis (note all children with any CNS danger sign are covered for meningitis under diagnosis very severe disease or CNS Danger sign). "Difficulty moving head" added as a question prior to examination for "stiff neck" to improve specificity of this sign and reduce the amount of children who need to be examined for stiff neck (as fever without danger signs is common, and difficulty moving head can be quickly observed). Other criteria in STGs for suspected meningitis not all included (also not in IMCI) as either poor sensitivity, specificity or poorly assessed at primary care level (bulging fontanelle, weak cry, irritability).	Adapted	IMCI 2014, IMCI TZ 2020		
	Simple febrile convulsion	Fever ≥7 days AND Single convulsion <15 min AND Age ≥12m and <6 years AND NO other danger signs AND NO stiff neck AND NO HIV	Suspicion of poisoning	No	PO Paracetamol 40-80 mg/Kg/day divided into 4 doses x 3 days [10-20mg/kg/dose four times a day x 3d]	Conditional	Simple febrile convulsion counselling No inpatient referral needed: Reasons to return to clinic.	New	Inclusion of simple febrile convulsion diagnosis: relatively common and benign condition, inclusion therefore reduces unnecessary referrals to hospital. IMCI & Tanzanian guidelines refer to convulsions plural as a criteria for meningitis - single convulsion therefore used as the starting point for diagnosis of simple febrile convulsion, but higher risk categories excluded (age <12m or ≥6y, prolonged convulsion, HIV, convulsion without fever, fever ≥7d, severe acute malnutrition, malaria). Criteria such as duration <15 min integrated, age adapted by expert panel to 12m to <6y.	Adapted	STGC 2018 p. 132	History of convulsion in current illness is a moderate predictor of severe disease (Amamburo et al., 2018; Conroy et al., 2015). IMCI TZ STGs refer to convulsions (plural) - multiple convulsions may indicate more severe disease. Only 0.2% of children with apparent simple febrile seizure had bacterial meningitis in a systematic review (Najafi-Zadeh et al., 2013). Haemophilus influenzae type B (Hib) and pneumococcal conjugate vaccines (PCV) have reduced overall risk of meningitis. Inpatient studies from Togo and Tanzania found mortality rates as high as 4 and 9.7% (Assogba, et al 2015; Winkler et al 2013); proportion of complex acute seizures twice that of rest of the world (Kwarki et al 2017). Under 12 month criteria - signs of bacterial meningitis generally more difficult to detect in infants than older children, often have more complex course / adverse outcomes and often need further investigations (Bast & Cornart, 2013; Offringa et al., 1994; Subcommittee on Febrile & American Academy of, 2011; Wilmshurst et al., 2015).
	Severe malaria	Malaria test positive AND Danger sign OR Severe pneumonia OR Severe anaemia (IMCI) or Hb <6g/dL OR Jaundice AND Malaria test performed in: Fever OR Unconscious /lethargic OR Convulsing now OR Convulsions in this illness		Yes - urgent	Pre-referral M Artesunate 2.4mg/kg/day divided into 1 dose for 1 days [2.4mg/kg/dose daily x 1 dose] (If Artesunate not available) IM Quinine (loading dose) 20 mg/Kg/day in 1 dose for 1 days [20 mg/Kg/dose daily x 1 dose] M/IV Ceftriaxone 50mg/kg/day divided into 1 dose for 1 days [50mg/kg/dose daily x 1d] (If Cef not available) M/IV Ampicillin 200mg/Kg/day divided in 4 doses for 1 days [50mg/kg/dose four times a day x 1 dose] (If Cef not available) M/IV Gentamicin 7mg/Kg/day divided into 1 dose for 1 days [7mg/kg/dose daily x 1 dose] PO Paracetamol 40-80 mg/Kg/day divided into 4 doses x 1 days [10-20mg/kg/dose four times a day x 1d]		Keep the child warm Prevent low blood sugar Refer urgently for inpatient management	Adapted	Severity criteria: danger signs as per IMCI 2014, and additional criteria from WHO (STG malaria guidelines which are feasible to assess in primary care, and good predictors of severe outcome - signs of respiratory distress, severe anaemia, jaundice (WHO, 2015; TZ MCHN 2018; Sypniewska et al. 2017)). Neck stiffness is not included as cerebral malaria is not associated with marked neck stiffness - note this is assessed and treated under 'suspected meningitis' above	YES	STGC 2018 p. 71, IMCI 2014, IMCI TZ 2020	
	Severe suspected malaria	Fever AND Malaria test unavailable AND Danger sign OR Severe pneumonia OR Severe anaemia (IMCI) or Hb <6g/dL OR Jaundice		Yes - urgent	Pre-referral M Artesunate 2.4mg/kg/day divided into 1 dose for 1 days [2.4mg/kg/dose daily x 1 dose] (If Artesunate not available) IM Quinine 20 mg/Kg/day in 1 dose for 1 days [20 mg/Kg/dose daily x 1 dose] M/IV Ceftriaxone 50mg/kg/day divided into 1 dose for 1 days [50mg/kg/dose daily x 1d] (If Cef not available) M/IV Ampicillin 200mg/Kg/day divided in 4 doses for 1 days [50mg/kg/dose four times a day x 1 dose] (If Cef not available) M/IV Gentamicin 7mg/Kg/day divided into 1 dose for 1 days [7mg/kg/dose daily x 1 dose] PO Paracetamol 40-80 mg/Kg/day divided into 4 doses x 2-5 days [10-20mg/kg/dose four times a day x 2-5d]. PO Artemether-lumefantrine two times a day for 3 days (Fixed doses: 50x10kg = 20/120mg / 150x25kg = 40/240mg / 250x35kg = 60/360mg / >35kg = 80/480mg) (If AL not available) PO Dihydroartemisinin-piperacillin daily for 3 days (Doses: >25mg = 20-35mg/kg/dose / >=25kg = 16-27mg/kg/dose) PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]		Keep the child warm Refer urgently for inpatient management Prevent low blood sugar	New idem		YES	idem	
	Uncomplicated malaria	Fever AND malaria test positive	Severe malaria	No	PO Artemether-lumefantrine two times a day for 3 days (Fixed doses: 50x10kg = 20/120mg / 150x25kg = 40/240mg / 250x35kg = 60/360mg / >35kg = 80/480mg) (If AL not available) PO Dihydroartemisinin-piperacillin daily for 3 days (Doses: >25mg = 20-35mg/kg/dose / >=25kg = 16-27mg/kg/dose) PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	Ensure adequate fluid and calorie intake No inpatient referral needed: Reasons to return to clinic.	Same	As per IMCI / STG guidelines / WHO malaria guidelines	YES	STGC 2018 p. 73, IMCI 2014, IMCI TZ 2020	

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	Suspected malaria	Fever AND malaria test not available	Severe suspected malaria	Yes - to clinic with RDT if possible to do in <2hrs AND no other severe diagnosis *Consider OP referral if already received treatment	If unable to test elsewhere in <2hrs OR other severe diagnosis: PO Artemether-lumefantrine two times a day for 3 days (Fixed doses: 50+10kg = 20/120mg / 150+25kg = 40/240mg / 250+35kg = 60/300mg / >35kg = 80/480mg) (If AL not available OR if persisting fever after completion of 1st line treatment) PO Dihydroartemisinin-piperaquine daily for 3 days (Doses: <25mg + 20-35mg/kg/dose / =>25kg = 18.27mg/kg/dose) PO Paracetamol 40-80 mg/kg/day divided into 4 doses x 7 duration [10-20mg/kg/dose four times a day x 7 duration]	Conditional	If unable to test elsewhere in <2hrs OR other severe diagnosis: Ensure adequate fluid and caloric intake No inpatient referral needed: Reasons to return to clinic if follow-up visit (consider referral) If able to test elsewhere in <2hrs OR other severe diagnosis: Refer for malaria testing	New	Refer for malaria test in another clinic: if feasible within 2 hours, and no other severe diagnosis, in order to reduce inappropriate prescription of antimicrobials	NEW		
	Complicated prolonged fever	Fever >2 weeks OR Fever 21 weeks AND severe comorbidity (SAM, very low WFA, HIV, sickle cell disease, cerebral palsy, severe anaemia, congenital heart disease)		Yes - urgent	PO Ciprofloxacin 20-40mg/kg/day divided into 2 doses for 7 days [10-20mg/kg/day x 7d] (If Cipro not available) PO Azithromycin 10mg/kg/day in 1 dose for 7 days [10mg/kg/dose daily x 7d] PO Paracetamol 40-80 mg/kg/day divided into 4 doses x 2-5 days [10-20mg/kg/dose four times a day x 2-5d]		Refer urgently for inpatient management Withhold antibiotics before TB assessment if possible	New	Criteria for diagnosis and treatment of children with prolonged fever: 7 days is used as a criteria for prolonged fever in line with IMCI, ePOCT differentiates those who require immediate further assessment (referral in lieu of antibiotic treatment) to cover typhoid fever, but in addition also covers UTI and pneumonia). This is determined by either severe comorbidity, or a fever duration of >2 weeks. This differs from IMCI which advises 'if fever is present every day for more than 7 days, refer for assessment', but also states 'give an appropriate antibiotic treatment for an identified bacterial source of infection'. Any child with danger signs / other severe classification would be urgently referred, therefore this approach reduces potentially unnecessary referral.	Adapted	IMCI 2014, IMCI TZ 2020	Coverage for several bacterial infections, notably enteric fever, occult urinary tract infections (UTI) and pneumonia. Oral ciprofloxacin is one of the recommended treatments according to the TZ STG for both enteric fever and UTI (p77 & 206), macrolides is the drug of choice for children > 5 years with pneumonia (p45). All identified UTI pathogens were sensitive to ciprofloxacin in a recent Tanzanian study (Nyamiriro et al., 2018). Salmoneella typhi isolates were 100% susceptible to ciprofloxacin in a study from rural Tanzania (Mahende et al., 2015). Molecular analysis of S. typhi throughout Sub-Saharan Africa did not show reduced susceptibility to ciprofloxacin, with the exception of Kenya (Al-Eman et al., 2016).
	Prolonged Fever	Fever 27 days AND Fever <2 weeks AND NO severe comorbidities a daily AND Malaria negative	Complicated prolonged fever FWS - bacterial	If attended health facility in last 14/7 consider referral	PO Ciprofloxacin 20-40mg/kg/day divided into 2 doses for 7 days [10-20mg/kg/day x 7d] (If Cipro not available) PO Azithromycin 10mg/kg/day in 1 dose for 7 days [10mg/kg/dose daily x 7d] PO Paracetamol 40-80 mg/kg/day divided into 4 doses x 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	No inpatient referral needed: Reasons to return to clinic If follow-up visit: Consider referral	Same	See above	Adapted	IMCI 2014, IMCI TZ 2020	See above
	Suspicion of Tuberculosis	Cough >2weeks OR Fever >2weeks OR Significant haemoptysis OR TB contact OR Significant weight loss / failure to gain (only asked in those >5years)		Yes - TB services (if not available at facility)	If fever: PO Paracetamol 40-80 mg/kg/day divided into 4 doses x 2-5 days [10-20mg/kg/dose four times a day x 2-5d]		Withhold antibiotics before TB assessment if possible Tuberculosis assessment at health facility Refer for specialized outpatient investigations: TB assessment	Adapted	Diagnostic criteria: Based on TZ / international guidelines. Include all diagnostic criteria proposed in TZ Standard treatment guideline except for "excessive night sweats" and "infection not responding to conventional antibiotics" taken out as diagnostic criteria for fear of misunderstanding and over-referral. "Significant weight loss" added upon suggestion by the Tanzanian expert committee.	Adapted	STGC 2018 p.50	- Children, especially infants and those under 2 years of age, have less symptoms but are at much higher risk of progression from infection to serious disease compared to other children over 10 years of age and adults (Bevers et al., 1997; J. Marais et al., 2004). - The risk of progression to disease is high in young children who are exposed to household members with TB (van Zyl et al., 2006) - Pulmonary Tuberculosis is a common cause of hemoptysis (Simon et al., 2017)
Universal assessment without source	Fever without source presumed bacterial infection	NO cough AND NO difficulty breathing AND NO Runny nose AND NO diarrhoea AND NO abscess, AND NO cellulitis, AND NO chicken pox, AND NO measles, AND NO scarlet fever, AND NO mumps, AND NO ear pain or discharge, AND NO dental abscess, AND NO sore throat or neck mass, AND NO localized joint or bony abnormality, AND NO pain or difficulty passing urine, AND NO pelvic inflammatory disease AND malaria test negative AND CRP <40mg/L AND Age 2m-35m AND Urinalysis unavailable or negative AND NOT Well appearing OR CRP Not available AND (Age <3 months, or Urinalysis negative/unavailable (3m-35m) AND NOT Well appearing OR CRP <40mg/L AND Age 2m-35m AND Urinalysis unavailable or negative AND NOT Well appearing	Other infectious diagnoses - malaria, pharyngitis, ear infection, complicated wound, extensive folliculitis, cellulitis, impetigo, abscesses, meningitis, measles, chicken pox, septic arthritis, prolonged fever, complicated neck mass, pelvic inflammatory disease, urinary tract infections, preseptal cellulitis, severe abdominal condition, and scarlet fever	If unexplained bleeding - urgent referral, if attended facility in last 14/7 consider referral (if recent antibiotic treatment), otherwise No	PO Ciprofloxacin 20-40mg/kg/day divided into 2 doses for 7 days [10-20mg/kg/day x 7d] AND PO Amoxicillin 10/75-100mg/kg/day divided in 2 doses for 7 days [50mg/kg/dose two times a day x 7d] (If Cipro & Amox not available) PO Co-Amoxiclav 8mg/120mg/kg/day divided into 2 doses for 7 days (dose based on TMP) [4mg/kg/dose two times a day x 7 days] PO Paracetamol 40-80 mg/kg/day divided into 4 doses x 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	If no unexplained bleeding: No inpatient referral needed: Reasons to return to clinic If no unexplained bleeding & follow-up visit: Consider referral If unexplained bleeding: Refer urgently for inpatient management Ensure adequate fluid intake	Adapted	IMCI only proposes antibiotics in children for which a bacterial source is identified. To increase sensitivity ePOCT proposes the use of CRP, urinalysis, and if unavailable a subjective assessment of "well appearing". Young children under 3 years in particular are not able to vocalize urinary symptoms, emphasizing the need of a urinary test in this population when no source of infection is identified.	Adapted	IMCI 2014, IMCI TZ 2020, TZ Std Med Lab Equipment Guidelines 2018	Predictors included to support healthcare providers in antibiotic decision-making for fever where a local source of infection is not identified. Urine is checked for children 3 - 36m (see febrile UTI below). For the DYNAMIC study CRP is used at a cut-off of 40mg/L considering the low pre-test probability in primary health care facilities and evidence gathered from the previous ePOCT study and a systematic review (Keller et al., 2017; Tipote et al., 2018). To further improve sensitivity in this algorithm, children under the age of 2 years with CRP below 40 mg/L will undergo a urine dipstick, since CRP is likely not sensitive enough to rule-out pyelonephritis in young children (Shahik, Borrell, Ewon, & Leeflang, 2015). This is in line with the WHO and expert recommendations, in which urine dipstick is proposed in children under 2 with undifferentiated fever (Baraff, 2000; World Health Organization, 2005). Finally if CRP and urine analysis is not available, a subjective assessment of "Child/patient well appearing" will help to distinguish children in need of antibiotics or not. Such subjective assessments, shared between clinicians and caretakers have been found to be as good or better than clinical signs, symptoms or laboratory measurements (Merritt et al., 2019; Van den Broek, Thompson, Burlink & Mant, 2012).
	Fever without source: Presumed viral illness	Fever AND NO cough AND NO difficulty breathing AND NO Runny nose AND NO diarrhoea AND NO abscess, AND NO cellulitis, AND NO chicken pox, AND NO measles, AND NO scarlet fever, AND NO mumps, AND NO ear pain or discharge, AND NO dental abscess, AND NO sore throat or neck mass, AND NO localized joint or bony abnormality, AND NO pain or difficulty passing urine, AND NO pelvic inflammatory disease AND malaria test negative AND CRP Not available AND (Urinalysis negative/unavailable (2m-24m) AND Well appearing OR CRP <40mg/L AND Age 2-14yr (Age 2m- <24m AND Urinalysis unavailable or negative AND Well appearing)	as above	If unexplained bleeding - urgent referral, otherwise No	PO Paracetamol 40-80 mg/kg/day divided into 4 doses x 2-5 days [10-20mg/kg/dose four times a day x 2-5d] Cough or cold symptomatic care	Conditional	Common cold or upper respiratory tract infection: Symptomatic care If no unexplained bleeding: No inpatient referral needed: Reasons to return to clinic If unexplained bleeding: Refer urgently for inpatient management	Adapted	idem	Adapted	IMCI 2014, IMCI TZ 2020, TZ Std Med Lab Equipment Guidelines 2018	
	Febrile urinary tract infection	Fever AND NO cough AND NO difficulty breathing AND NO Runny nose AND NO diarrhoea AND NO abscess, AND NO cellulitis, AND NO chicken pox, AND NO measles, AND NO scarlet fever, AND NO mumps, AND NO ear pain or discharge, AND NO dental abscess, AND NO sore throat or neck mass, AND NO localized joint or bony abnormality, AND NO pain or difficulty passing urine, AND NO pelvic inflammatory disease AND malaria test negative AND Age 2m - 24m AND CRP Not available or <40mg/L AND Pathological Urinalysis		No	PO Ciprofloxacin 20-40mg/kg/day divided into 2 doses for 10 days [10-20mg/kg/day two times a day x 10 days] (If Cipro not available) PO Co-Amoxiclav 100mg/kg/day divided in 2 dose for 10 days [50mg/kg/dose two times a day x 10d] PO Paracetamol 40-80 mg/kg/day divided into 4 doses x 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	No inpatient referral needed: Reasons to return to clinic Refer if oral intake not possible	Adapted	Urine test (when available) for those 3- 24 months without other identified source of fever. UTI is more common in those >24months, for whom urinary symptoms are required before testing urine (see genitourinary section for UTI / pyelonephritis). WHO and experts also propose using urine dipstick for undifferentiated fever, using a cut-off of 2 years (Baraff, 2000; World Health Organization, 2005).	Adapted	STGC p. 204	TZ STG recommends amoxicillin or ciprofloxacin for febrile UTI. Amoxicillin shows increasing resistance against UTI isolates (Bell et al., 2018; Leung et al., 2019). Therefore, ciprofloxacin has been chosen as 1st line.

Complaint category	DIAGNOSIS	ePOCT+ DYN TZ Algo	Excluded by	Referral	TREATMENTS	Follow-up (always includes reasons to return to clinic)	Management	Difference with ePOCT 2014 (Adapted, Same)	Modifications in respect to TZ guidelines: Standard Treatment Guidelines and Essential Medicines List for Children and Adolescents 2018 (STGC 2018, or IMCI 2014 (TZ, IMCI 2020), or IMAI 2009)	In line with Tanzania guidelines and/or IMCI? (YES, Adapted from TZ guidelines), NEW = Not in TZ guideline)	TZ or (MCI/MAI Guidelines)	Additional references
Universal assessment respiratory problem	Severe pneumonia / very severe disease	Cough OR difficulty breathing AND Very fast breathing (RR 2-11m ≥80/min, 12-59m 50/min, 5-12y ≥40/min, 13-14y ≥30/min) AND (chest indrawing OR Patient unable to finish sentence due to difficult breathing (children 5-14 years) OR Danger sign OR Grunting OR SpO2 <90% OR Severe difficulty breathing requiring referral		Yes - urgent	Pre-referral: IMV Ampicillin HD 400mg/Kg/day divided in 4 doses for 1 days [100mg/kg/dose four times a day x 1 d] AND IMV Gentamicin 7mg/Kg/day divided into 1 dose for 1 days [7mg/kg/dose daily x 1d] (if Amp & Gent not available) IMV Ceftriaxone 50mg/kg/day divided into 1 dose for 1 days [50mg/kg/dose daily x 1 d] Prevent low blood sugar If Fever: PO Paracetamol 40-80mg/Kg/day divided into 4 doses for 1 days [10-20mg/kg/dose four times a day x 1 d] If wheeze: bronchodilator pre-referral / on way			Adapted	Tanzania Standard Treatment Guidelines: All criteria except for lower chest indrawing alone was included as criteria for diagnosis. The omission of lower chest indrawing alone was done to align with IMCI 2014. In the DYNAMIC study, respiratory rate 10 above the IMCI RR cut-off and chest indrawing or unable to complete sentence, added as found useful in the ePOCT 2014 study when using respiratory rate percentiles (Kettie et al. 2019). Combining chest indrawing with very fast breathing was used to increase specificity (McCullum et al., 2015; Williams et al., 2016) as was "unable to complete sentence" in children above 5 years. IMCI Cough / difficulty breathing with danger sign or SpO2 <90% as per IMCI. Stridor not included as included under severe croup (and foreign object in airway is with any difficulty breathing).	Adapted	IMCI 2014, IMCI TZ 2020, STGC 2018 p.43	Additional predictors: Grunting and hypoxemia <90% SaO2, are well established predictors for severe pneumonia and severe outcome (among children with severe pneumonia) maintained in ePOCT, and also included in the Tanzanian national guidelines (Benet et al., 2017; Bradley et al., 2011; Harris et al., 2011; Rambaud-Althaus, Althaus, Genton, & D'Acremont, 2015; World Health Organization, 2013a; Dean, 2018; Mann, 2020). "Severe difficult breathing" was included as proposed by the British Thoracic Society (Harris et al., 2011). This is to improve sensitivity by allowing clinicians to use their intuition, often found to be better than individual predictors (Blacklock, Mayon-White, Coak, & Thompson, 2011; Menditi et al., 2015; Van den Briel, Thompson, Bunlix & Mant, 2012). Deep breathing, nasal flaring, tracheal tug, and central cyanosis are included in the description of the composite variable of "Severe difficult breathing needing referral" also found to be good predictors of radiological pneumonia, hypoxemia and of severe outcome (Rambaud-Althaus, Althaus, Genton, & D'Acremont, 2015; Chandra, 2021; Shah, 2017; Kuti, 2013).
	Bacterial Pneumonia	(Cough OR Difficulty breathing) AND Chest indrawing AND Fever >= 4 days AND NO PS: Danger Signs AND CRP >= 40mg/L OR (Cough OR Difficulty breathing) AND (PS: Fast breathing) AND Severe comorbidities a daily AND NO PS: Danger Signs AND CRP > 10 mg/L	Severe pneumonia	Yes - no improvement (persisting fast breathing or chest indrawing and CRP >40mg/L, despite 3 days of antibiotic treatment)	PO Amoxicillin HD 75-100mg/Kg/day divided in 2 doses for 5 days [37.5-50mg/Kg/dose two times a day x 5d] (if Amox not available) PO Co-trimoxazole 8mg/kg/day (dosing based on TMP) two times a day for 5 days [4mg/kg/dose daily x 5d] PO Paracetamol 40-80mg/Kg/day divided into 4 doses x 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	Adequate fluid & caloric intake	Adapted	Fever criteria: IMCI defines pneumonia as cough or difficulty breathing, with chest indrawing or fast breathing, regardless of fever (present or absent). As atypical pneumonia is uncommon in immunocompetent children and found to be highly sensitive for the diagnosis of pneumonia (Rambaud-Althaus, 2015; Mathews, 2009), fever was excluded as an absolute criteria for bacterial pneumonia in order to reduce antibiotic prescription except those with severe comorbidities a daylies and in the case of the TMC1 study those with wheezing and no improvement after bronchodilator, and those with no wheeze. Additionally chest indrawing was found to be a relatively good predictor of treatment failure, as such for children with chest indrawing, fever is not a requirement for the diagnosis of pneumonia (McCullum et al., 2015). Fever 24 days was also included as an initial predictor to increase sensitivity as duration of fever has been found to be a significant predictor of pneumonia and serious bacterial infection (Murphy, van de Pol, Harper, & Bachur, 2007; Neuman, Monceaux, Scully, & Bachur, 2011; Nijman et al., 2013; Elshout et al., 2011; deSantis, 2017). In particular cases a child with pneumonia can present with cough and fever 2-4 days, without tachypnea or other signs of respiratory distress (Murphy et al., 2007). CRP: DYNAMIC also differentiates viral and bacterial pneumonia with CRP as also proposed in Tanzania Standard Treatment guidelines. CRP is included in the Tanzanian standard medical laboratory equipment list at the dispensary and health centre level (MOH, 2018).	Adapted	STGC 2018 p. 43, IMCI 2014, IMCI TZ 2020, IMAI 2009	Use of CRP: Tachypnea and other clinical signs have been found to be poor predictors of bacterial or radiological pneumonia (McIntosh, 2002; Rambaud-Althaus et al., 2015; Shah, Bachur, Simek, & Neuman, 2017; Ries, 2008). - The use of CRP has been found to safely reduce antibiotic prescription in children with acute respiratory infections (Alambas, Jensen, Jørgensen, Hørdtjær, & Ejernum, 2014; Do et al., 2015; Kristina Kettie et al., 2019). - CRP found to be cost-effective (Lubell et al., 2019). - Cut-point of 40mg/L, corresponds to the optimal threshold (44 mg/dL) in terms of sensitivity and specificity in predicting X-Ray defined pneumonia in a cohort of febrile Tanzanian children with an acute respiratory illness in the outpatient setting (Edrman et al., 2019). This threshold was also found to distinguish bacterial pneumonia compared to respiratory syncytial virus pneumonia among children hospitalized with severe pneumonia with an area under the curve of 0.87 (Higdon et al., 2017). - The sensitivity and specificity for detecting bacterial infections may be lower in immunosuppressed patients (de Oliveira, 2017), combined with higher pre-test probability the CRP threshold was lowered for those with severe comorbidities a daylies in order to increase sensitivity and post-test probability of algorithm.
	(MCI/MAI) Pneumonia	Cough OR difficulty breathing AND Chest indrawing OR fast breathing (RR ≥50/min for 2-11m, ≥40/min (12-59m), ≥30/min (5-12y), ≥20/min (13-14y)) AND CRP unavailable AND Fever OR (NO Fever AND Severe comorbidities a daily) OR (NO Fever AND chest indrawing)	Severe pneumonia	Yes - if no improvement (persisting fast breathing or chest indrawing despite 3 days of antibiotic treatment in children under 12 months or HIV+)	PO Amoxicillin HD 75-100mg/Kg/day divided in 2 doses for 5 days [37.5-50mg/Kg/dose two times a day x 5d] (if Amox not available) PO Co-trimoxazole 8mg/kg/day (dosing based on TMP) two times a day for 5 days [4mg/kg/dose daily x 5d] PO Paracetamol 40-80 mg/Kg/day divided into 4 doses x 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	Ensure adequate fluid and caloric intake No inpatient referral needed: Reasons to return to clinic	As above				
	Viral Pneumonia	Cough OR difficulty breathing AND Chest indrawing OR fast breathing (RR 2-11m ≥50/min, 12-59m ≥40/min, 5-12y ≥30/min, 13-14y ≥20/min OR Fever ≥4 days) AND No Danger signs AND CRP <40mg/L or <10mg/L (in those w severe comorbidities a daylies)	Bacterial pneumonia / (MCI/MAI) pneumonia / Severe pneumonia	No	PO Paracetamol 40-80 mg/Kg/day divided into 4 doses x 2-5 days [10-20mg/kg/dose four times a day x 2-5d] (if febrile)	Conditional	URTI symptomatic care advice Adequate fluid & caloric intake + Advice on why not to give antibiotics	Adapted	As above	Adapted	STGC 2018 p. 43, IMCI 2014, IMCI TZ 2020, IMAI 2009	
	Common cold (URTI)	Cough OR difficulty breathing OR Runny nose	Severe pneumonia / (MCI/MAI) pneumonia / Bacterial/Viral pneumonia / CNS danger sign / measles / Mild croup / Severe croup / Irritation injury / Complicated chicken pox / Suspicion of foreign object / Significant hemoptysis / Reactive airway disease	No	PO Paracetamol 40-80 mg/Kg/day divided into 4 doses x 2-5 days [10-20mg/kg/dose four times a day x 2-5d] (if febrile)	Conditional	Common cold or upper respiratory tract infection: Symptomatic care Ensure adequate fluid and caloric intake No inpatient referral needed: Reasons to return to clinic Explain why oral antibiotics are not useful for this patient	Same	In line with Tanzania STG.	Yes	STGC 2018 p. 46 and 60	
	Reactive Airway Disease	Age ≥1 year AND Cough OR Difficulty breathing AND Chest indrawing OR fast breathing (RR 2-11m ≥50/min, 12-59m ≥40/min, 5-12y ≥30/min, 13-14y ≥20/min) AND Wheezing AND NO respiratory distress AND Improvement with trial of bronchodilators	Severe pneumonia / (MCI/MAI) pneumonia / Bacterial/Viral pneumonia / CNS danger sign / measles / Mild croup / Severe croup / Irritation injury / Complicated chicken pox / Suspicion of foreign object / Significant hemoptysis / Reactive airway disease	Yes - Consider outpatient assessment if recurrent episodes	INH Salbutamol 200mcg four times a day for 14 days (if Salbutamol not available) INH Budesonide 200mcg two times a day-four times a day for 14 days	Conditional	Advice on inhaler use Adequate fluid & caloric intake + Advice on why not to give antibiotics	Adapted	In line with STG guidelines for bronchial asthma, limiting to non-severe symptoms (severe symptoms captured within severe pneumonia). Management of wheezing similar to that described in IMCI.	YES	STGA 2018 p. 89, STGC 2018 p. 63, IMCI 2014, IMCI TZ 2020	
	Severe Croup	6m-59m (Cough AND [Barking cough OR Stridor] OR [Difficulty breathing AND Stridor] OR Stridor at rest	Suspicion of foreign object in airways	Yes - urgent IF no improvement 1 hr after steroids or steroids not available	PO Prednisolone 1mg/Kg/day in 1 dose for 1 days [1mg/kg/dose daily x 1 dose] (if Prednisolone not available) PO Dexamethasone 0.15 mg/kg/day in 1 dose for 1 days [0.15mg/kg/dose daily x 1 dose]		Croup counselling (if improved) + Advice on why not to give antibiotics	New	In line with STGC 2018 for acute laryngo-tracheobronchitis, but adds a test with corticosteroids in order to see if the child needs to be referred or not.	Adapted	STGA 2018 p. 99	Use of glucocorticoids: Reduces symptoms at two hours, shortened hospital stay, and reduced the rate of return visits to care (Gates A et al. 2018; Fernandes et al. 2019). - Low dose corticosteroids non-inferior in terms of clinical outcome compared to normal dose corticosteroids. (Parker & Cooper, 2019)
	Mild Croup	6m AND (Cough AND [Barking cough OR Stridor] OR [Difficulty breathing AND Stridor] OR Stridor at rest	Suspicion of foreign object in airways / Severe pneumonia	No		Conditional	Croup counselling + Advice on why not to give antibiotics	New	In line with STG guidelines for acute laryngo-tracheobronchitis	YES	IMCI 2014, STGC 2018 p. 99	
	Suspicion of foreign object in airways	Cough or Difficult breathing AND Wheeze or stridor AND Possibility of foreign object in airway		Yes - urgent				New	To simplify algorithm only use possibility of inhalation of foreign object in children with difficulty breathing.	Yes	STGC 2018 p. 249	

Complaint category	DIAGNOSIS	ePOCT+ DYN TZ Algo	Excluded by	Referral	TREATMENTS	Follow-up (always includes reasons to return to clinic)	Management	Difference with ePOCT 2014 algorithm (New, Adapted, Same)	Modifications in respect to TZ guidelines: Standard Treatment Guidelines and Essential Medicines List for Children and Adolescents 2018 (STGC 2018, or IMCI 2014 (TZ IMCI 2020), or IMAI 2009)	In line with Tanzania guidelines and/or IMCI? (YES, Adapted from TZ guidelines), NEW = Not in TZ guideline)	TZ or (MCI/MAI Guidelines)	Additional references
	Significant hemoptysis	Cough OR Difficulty breathing AND Significant hemoptysis (> 1 episode)		Yes - for investigation				New	Added this algorithm, based on recommendation by TZ expert panel.	Adapted	STGC 2018 p.43	
Gastrointestinal / abdominal (diarrhoea / dehydration) in universal assessment	Severe Dehydration	(≥3 loose/liquid stools in 24 hrs OR Vomiting) AND Lethargic / unconscious OR (Vomiting everything OR Unable to drink / breastfeed OR Sunken eyes slow or very slow skin pinch OR Dehydration risk*) AND (Unable to tolerate oral fluid only checked if not unconscious / lethargic / comatose) OR (Unconscious / lethargic OR Unable to drink / breastfeed) AND (Sunken eyes OR slow / very slow skin pinch)		Yes - urgent if dehydration is only diagnosis and no danger signs and able to give IV fluids at facility - reassess before refer	If other severe classification: pre-referral / en route fluid management (IV / NG if unable to tolerate oral fluid, ORS if able to tolerate oral) If no other severe classification: IMCI rehydration plan C If improves with Plan C → Plan B and then A, including if diarrhoea: PO Zinc Sulfate 10mg daily for 10 days			Adapted	Dehydration score adapted for some and severe dehydration, requiring only one criteria for lethargic/unconscious to be defined as severe dehydration when associated with diarrhoea, vomiting, or unable to drink. Fluid challenge proposed to wide subset to distinguish between severe and some dehydration, as this will distinguish those that need to be referred, and those that can be treated at home. * Dehydration risk ≥ -12m: ≥4 loose stools in 24 hrs / ≥ 4 episodes vomiting in 24 hrs / (≥3 loose stools AND vomiting) Dehydration risk 12-59m: ≥5 loose stools in 24 hrs / ≥ 5 episodes vomiting in 24 hrs / (≥3 loose stools AND vomiting) Dehydration risk 5-14y: ≥8 loose stools or ≥6 episodes of vomiting / 24 hours, or ≥5 loose stools/24 hours and vomiting	Adapted	STGC p. 53, IMCI 2014, IMCI TZ 2020	Adaptation of WHO Dehydration scale: Laboratory tests, urine analysis, ultrasound, or isolated clinical findings are not reliable for detecting dehydration in the pediatric population (Freedman, Vandermeer, Milne, & Hartling, 2015; Steiner, DeWalt, & Byrley, 2004). A combination of clinical features are used in several scales such as the WHO Scale, the Gonick Score and the Clinical Dehydration Scale (CDS), to estimate the percentage of dehydration in childhood gastroenteritis. However none of these scales provide accurate assessment of the dehydration status in resource-limited and high income settings and most studies were conducted among patients with gastroenteritis in the inpatient setting (Falszewska, Szajewska, & Dziechciarz, 2018; Jauregui et al., 2014; Pringle et al., 2011). To help distinguish some versus severe dehydration, ePOCT+ utilizes a pragmatic oral fluid test to guide management that can be done at home or needs to be performed in the health facility, among this low pre-test probability population. Oral fluid test can decrease the rates of intravenous fluid (IVF) use in favor of oral rehydration therapy (ORT) (Umama et al., 2018). ORT is as effective as IVF for mild to moderately dehydrated children (Spandorfer et al., 2005). Further statistical analysis will be used to improve this algorithm at later stages.
	Some Dehydration	Unable to drink / breastfeed OR Dehydration risk OR skin pinch goes slowly OR sunken eyes AND Oral fluid test: drinks eagerly, thirstily (only if no CNS danger signs) OR Dehydration risk* AND (Sunken eyes AND slow / very slow skin pinch) AND Drinks normally	Severe dehydration; severe persistent diarrhoea	No	If severe classification: ORS on way to hospital If no severe classification: ORS Plan B in clinic If improves with Plan B, Plan A - ORS Home rehydration If diarrhoea: PO Zinc Sulfate 10mg daily for 10 days	Conditional	Feeding Counseling (age specific) No inpatient referral needed: Reasons to return to clinic:	MODIFIED	As above	Adapted	STGC p. 53, IMCI 2014, IMCI TZ 2020	As above
	Severe persistent diarrhoea	≥ 3 loose / liquid stools in 24 hrs AND Diarrhoea duration ≥14 days AND Some dehydration	Severe dehydration; some dehydration	Yes	If Severe dehydration and no other severe classification: Plan C before referral If some dehydration and no other severe classification: Plan B before referral If other severe classification: pre-referral / en route fluid management		Refer for inpatient management	New	In line with IMCI 2014 and IMCI TZ 2020	Yes	IMCI 2014, IMCI TZ 2020	
	Persistent diarrhoea	≥ 3 loose / liquid stools in 24 hrs AND Diarrhoea duration ≥14 days AND NO blood in stools AND NO dehydration	Severe dehydration; severe persistent diarrhoea	Yes - if no improvement after 5 days of zinc and feeding counseling, or if HIV+	PO Zinc sulfate 10mg daily for 10 days If no Vitamin A in the past month, or already on Read To Use Therapeutic Food: PO Vitamin A daily for 1 days (fixed dose per age: 6-12m = 100,000IU / 1y = 200,00IU) Plan A - ORS Home rehydration	Conditional	Feeding counseling (age based) Explain why oral antibiotics are not useful for this patient No inpatient referral needed: Reasons to return to clinic: IF followup visit & already treated with Zinc > 5days: Refer urgently for inpatient management If HIV: Refer for outpatient evaluation: HIV care and treatment center	New	In line with STGC (limited work-up acceptable for primary care health facilities) and IMCI, however use of low dose Zinc.	Adapted	STGC p. 58, IMCI 2014, IMCI TZ 2020	- Use of low dose Zinc (Dhingra et al., NEJM, 2020)
	Acute diarrhoea	≥ 3 loose / liquid stools in 24 hrs AND Diarrhoea duration <14 days	Severe dehydration; some dehydration; severe persistent diarrhoea; dysentery	No	PO Zinc sulfate 10mg daily for 10 days Plan A - ORS Home rehydration	Conditional	Feeding counseling Explain why oral antibiotics are not useful for this patient No inpatient referral needed: Reasons to return to clinic:	Same	In line with STGC (limited work-up acceptable for primary care health facilities) and IMCI, however use of low dose Zinc.	Adapted	STGC p. 58, IMCI 2014, IMCI TZ 2020	- Use of low dose Zinc (Dhingra et al., NEJM, 2020)
	Dysentery	Loose or liquid stools AND Blood in stool	Persisting dysentery / Severe abdominal condition	No	≥6: If fever or Known HIV or MUAC for age z-score < -3 : PO Ciprofloxacin 20-40mg/kg/day divided into 2 doses for 5 days [10-20mg/kg/day x 5d] ≤5: If fever or Known HIV: PO Ciprofloxacin 20-40mg/kg/day divided into 2 doses for 5 days [10-20mg/kg/day x 5d] IF ≥2mth: PO Zinc sulfate 10mg daily for 10 days Plan A - ORS Home rehydration	Conditional	No inpatient referral needed: Reasons to return to clinic:	Same	In line with IMCI 2014 and IMCI TZ 2020, however selective antibiotic treatment in children above 5 years, and use of low dose Zinc.	Adapted	STGC p. 60, IMCI 2014, IMCI TZ 2020	- Use of low dose Zinc (Dhingra et al., NEJM, 2020) - Need for antibiotic stewardship in children above 5 years given increasing antibiotic resistance (Rangbar et al., 2018) based on population with highest risk factors for mortality: HIV infection, malnutrition, and young age (Tickell et al., 2017).
	Persisting dysentery	Loose or liquid stools AND follow-up consultation AND Return visit for dysentery after 3 days of treatment with ciprofloxacin AND Symptoms worse or the same: Number of stools, amount of blood in stools, fever, abdominal pain or eating		Yes - if no improvement after 3 days or HIV+, age <12 months, has severe malnutrition, or measles.	PO Azithromycin 10mg/kg/day in 1 dose for 5 days [10mg/kg/dose daily x 5d] IF ≥2mth: PO Zinc sulfate 10mg daily for 10 days Plan A - ORS Home rehydration	Conditional	IF severe acute malnutrition, measles rash, HIV or ≥12mth: Refer urgently for inpatient management No inpatient referral needed: Reasons to return to clinic:	Adapted	In line with IMCI 2014 for follow-up management, except does not integrate status of dehydration from first visit.	Adapted	STGC p. 60, IMCI 2014, IMCI TZ 2020	
	Severe Abdominal Condition	Vomiting OR Blood in stool OR Abdominal pain AND Suspicion of severe GI bleeding OR Bilious vomiting OR Abdominal hernia obstructed / incarcerated (irreducible / coloured / tender) OR (20y) Severe abdominal palpation		Yes - urgent	Pre-referral If Fever: PO Metronidazole 20mg/kg/day divided into 2 doses for 1 days [10mg/kg/dose two times a day x 1 dose] IMV Ceftriaxone 20mg/kg/day divided into 1 dose for 1 days [50mg/kg/dose daily x 1 dose] If Cal not available: PO Ciprofloxacin 20-40mg/kg/day divided into 2 doses for 1 days [10-20mg/kg/day x 1d] PO Paracetamol 40-100 mg/Kg/day divided into 4 doses for 1 days [10-20mg/kg/dose four times a day x 1d]		Refer urgently for inpatient management	New	Combining many signs of severe gastro-intestinal conditions including appendicitis, intestinal obstruction, and intussusception. Equivalent to Severe or Surgical abdominal problem in IMAI 2009	Adapted	STGC p. 233, IMAI 2009 p. 25	Epidemiology: In sub-Saharan Africa, pediatric surgery patients are responsible for 6-12% of all pediatric admissions (Bisler et al., WHO 2002). Bilious vomiting: "Bilious vomiting" suggests a post-ampullary source linked to a possible bowel obstruction (Singh, Shah, Bansal, & Jayashree, 2013). In one cohort of children, bilious vomiting and lethargy were the best clinical predictors to identify children with intussusception (Wehmiller, Buonomo, & Bachur, 2011). Tender colored abdominal bulge: A tender/colored abdominal bulge was also included to detect incarcerated hernias and intussusception, palpable in approximately 60% of cases of intussusception (Marscovtere, Isahary, White, & Holubar, 2017). Severe abdominal palpation needing referral: Given the complexity in diagnosing appendicitis and peritonitis, "Severe abdominal palpation needing referral" was used as a single predictor to incorporate a number of clinical signs and symptoms that have been found to be strongly associated with acute appendicitis. These include rebound tenderness, mid-abdominal pain migrating to the right lower quadrant, and abdominal pain when coughing and hopping (Benabbas, Hanna, Shah, & Siment, 2017; Bundy et al., 2007). This type of subjective predictor also allows clinicians to use their overall clinical assessment and gut-feeling, often found to be better than individual predictors (Meridith et al. 2019; Van den Bruel, Thompson, Buntrix & Mart, 2012). Exclusion of CRP: CRP was not considered for the diagnosis of peritonitis and appendicitis given that it was found to not have sufficient sensitivity or specificity to adequately rule-in or rule-out acute appendicitis (Yu et al., 2013).

Complaint category	DIAGNOSIS	ePOCT+ DYN TZ Algo	Excluded by	Referral	TREATMENTS	Follow-up (always includes reasons to return to clinic)	Management	Difference with ePOCT 2014 algorithm (New, Adapted, Same)	Modifications in respect to TZ guidelines: Standard Treatment Guidelines and Essential Medicines List for Children and Adolescents 2018 (STGC 2018), or IMCI 2014 (TZ IMCI 2020), or IMAI 2009	In line with Tanzania guidelines and/or IMCI? (YES, Adapted from TZ guidelines), NEW = Not in TZ guideline)	TZ or IMCI/IMA Guidelines	Additional references
	Non-Severe Abdominal Condition	Vomiting OR <3 loose / liquid stools / 24 hrs OR Abdominal pain	Severe abdominal condition / severe or some dehydration / constipation / acute diarrhea /	No	IF abdominal pain: PO Paracetamol 40-80 mg/kg/day divided into 4 doses x 2-5 days [10-20mg/kg/dose four times a day x 2-5d]. PLAN A: ORS Home rehydration	Conditional	Feeding counselling (age based) IF <8mth: guidance on colic If loose stools: Plan A - ORS at home No inpatient referral needed: Reasons to return to clinic Explain why oral antibiotics are not useful for this patient	New	Categorizing non-severe gastrointestinal conditions that are not characterized by acute diarrhea, dysentery, severe abdominal condition, dehydration, or other gastrointestinal conditions. Similar to Gastroenteritis or other GI problem in IMAI 2009. This diagnosis allows the opportunity to provide guidance on feeding and why antibiotics are not necessary.	Adapted	IMAI 2009 p. 27	see ref. for severe abdominal condition
	Constipation	NO diarrhea AND Constipation: Decreased frequency of hard stools	Inguinal hernia, Severe abdominal condition,	No		Conditional	Constipation counselling No inpatient referral needed: Reasons to return to clinic	New	Categorized within Other GI problem in IMAI 2009.	Adapted	IMAI 2009 p. 28	Highly prevalent among children (Poodar, 2016; Koppen et al., 2018), with a prevalence up to 20.6% (van den Berg et al., 2006). Predictions leading to the diagnosis were adapted and simplified according IMAI 2009 and the ESPGHAN and NASPGHAN evidence-based recommendations (Tabbers et al., 2014)
	Oxyuriasis	Age 1 - 14 years Anal itching OR worms in stool		No	IF >=12mth: PO Mebendazole (treatment) (Age >=1yr) 100mg daily for 1 days & repeat after 14 days (if Mebendazole not available) PO Albendazole (treatment) (age-based dose) daily for 1 days & repeat in 14 days (fixed dose: Age >=1yr to <2yr = 200mg / Age >=2yr to <5yr = 400mg)	Conditional	No inpatient referral needed: Reasons to return to clinic	New	Added. Not in IMCI or Tanzanian guidelines	NEW		Epidemiology: Worm infections including oxyuriasis are important global health conditions in both high- and LMIC, affecting growth and cognitive development (Weatherhead et al., 2015). More than one billion people are infected with pinworm globally (Wendt et al., 2019) with up to 28% of infected children globally (Betthey et al., 2008). Diagnosis and treatment: - Treatment choice and diagnosis (Leder K & Weller P, 2020) - Success rates after treatment with Mebendazole or Albendazole range between 90-100% (Wendt et al., 2019)
	Loss of appetite	Eating a lot less than usual (<5 years)	All other GI diagnoses, all infections	No		Conditional	Feeding counselling No inpatient referral needed: Reasons to return to clinic	New	Added. Not in IMCI or Tanzanian guidelines	NEW		- Frequent chief complaint in ePOCT study (Ketel et al. 2017)
Universal Assessment: Diagnoses from additional tests not proposed by algorithm	Intestinal parasitic infection: Nematode	Additional test not proposed by algorithm AND Stool microscopy: Ova		No	IF >=12mth: PO Mebendazole (prevention) (Age >=1yr) 500mg daily for 1 days (if Mebendazole not available) PO Albendazole (prevention) (age >=2yr) 400mg daily for 1 days	Conditional	No inpatient referral needed: Reasons to return to clinic	New	In line with STGC	Same	STGC p. 66	
	Intestinal parasitic infection: Protozoa	Additional test not proposed by algorithm AND Stool microscopy: Trophozoites / Cysts		No	PO Metronidazole 20mg/kg/day divided into 2 doses for 7 days [10mg/kg/dose two times a day x 7d]	Conditional	No inpatient referral needed: Reasons to return to clinic	New	In line with STGC	Same	STGC p. 65	
	Typhoid Fever	Additional test not proposed by algorithm AND Widal test: positive		No	PO Ciprofloxacin 20-40mg/kg/day divided into 2 doses for 10 days [10-20mg/kg/day x 10d] (if Cipro not available) PO Azithromycin 10mg/kg/day in 1 dose for 7 days [10mg/kg/dose daily x 7d] PO Paracetamol 40-80 mg/kg/day divided into 4 doses x 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	No inpatient referral needed: Reasons to return to clinic	New	In line with STGC	Same	STGC p. 77	Widal test not proposed by ePOCT: - Widal test not proposed within ePOCT+ algorithms other than clinician initiated tests given the low sensitivity and specificity of the test (Mawazo et al., 2019; Andulem et al., 2014; Mengist et al., 2017)
	Hyperglycemia	Additional test not proposed by algorithm AND Glucose test ≥ 7 mmol/L AND Fasting OR Glucose test ≥ 11.1 mmol/L	Outpatient consultation for diabetes	No		No	Outpatient referral: Diabetes clinic	New	Adapted fasting blood glucose threshold from STGC at 6.1 mmol/L to ≥7 mmol/L, as proposed by the WHO (Definition and Diagnosis of Diabetes Mellitus and Intermediate hyperglycaemia, 2006), and the International Diabetes Federation + International Society of Pediatric and Adolescent Diabetes (Pocketbook for management of diabetes in childhood and adolescence in under-resourced countries, 1st edition, 2017)	Adapted	STGC p. 139	Threshold for diagnosis of diabetes: - WHO, Definition and Diagnosis of Diabetes Mellitus and intermediate hyperglycaemia, 2006 - IDF and ISPAD, Pocketbook for management of diabetes in childhood and adolescence in under-resourced countries, 1st edition, 2017
	Severe hypoglycemia	Additional test not proposed by algorithm AND Glucose test < 2.5 mmol/L (or <3 mmol/L if malnourished) MUAC <11.5cm or WFA or WHF ↓ score <3 or MUAC for age z-score <-3	Complicated SAMI CNS Danger signs/Very severe disease / Very severe febrile disease	Yes - urgent	if unable to drink/feed, or vomiting everything, Dextrose IV bolus / NG sugar water	No		New	In line with STGC	Same	STGC p. 14	Hypoglycemia a good predictor of severe disease: - While hypoglycemia was identified as a good predictor of severe disease, this was in children with advanced disease often at higher level care or among hospitalized children (Chandra et al., 2021), the predictive value at the primary care level is not clear.
Urine / Genital	Pyelonephritis	Age ≥24 months AND Pain or difficulty passing urine AND (Fever or Costovertebral tenderness (≥10 years)) AND Pathological urinalysis OR Urine not available	Persisting pyelonephritis	if not able to eat/drink - urgent referral	PO Ciprofloxacin 20-40mg/kg/day divided into 2 doses for 10 days [10-20mg/kg/day x 10d] (if Cipro not available) PO Co-Amoxicillin/Clavulanic acid 80-100mg/kg/day divided into 2 doses for 10 days [40-50mg/kg/dose two times a day x 10d] PO Paracetamol 40-80 mg/kg/day divided into 4 doses x 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional		New	Distinction between lower UTI and pyelonephritis, modification in antibiotic treatment due resistance to amoxicillin in urinary tract infection pathogens, maintained ciprofloxacin from STGC. Minimal age threshold of 24 months to identify UTI or pyelonephritis via urinary symptoms (dysuria).	Adapted	STGC 2018 p. 204	- TZ STGC recommends amoxicillin or ciprofloxacin for febrile UTI. Amoxicillin shows increasing resistance against UTI isolates (Selli et al., 2018; Leung et al., 2019). Therefore, ciprofloxacin has been chosen as 1st line. - Co-amoxiclav as 2nd line treatment (Montini et al., 2007) - Identification of UTI or pyelonephritis based on symptoms of dysuria starting at age 2 years (Raszka et al., 2005)
	Persisting pyelonephritis	Age ≥24 months AND Pain or difficulty passing urine AND (Fever or Costovertebral tenderness (≥10 years)) AND Follow-up consultation AND Completed three day antibiotic treatment for urinary tract infection or pyelonephritis		Yes		No	Continue treatment and medication prescription as previously prescribed Refer for inpatient management	New	Added referral in case there is no improvement after three days of antibiotic treatment following proposal from Tanzanian expert panel.	Addition	STGC 2018 p. 204	
	Lower urinary tract infection	Age ≥24 months AND Pain or difficulty passing urine AND (NO Fever or Costovertebral tenderness (≥10 years)) AND Pathological urinalysis OR Urine not available	Pyelonephritis	No	PO Co-trimoxazole 8mg TMP/kg/day divided into 2 doses for 3 days (dosage based on TMP) [4mg/kg/dose two times a day x 3d] (if Co-trimoxazole not available) PO Amoxicillin 50mg/kg/day divided in 2 doses for 3 days [25mg/kg/dose two times a day x 3d]	Conditional	No inpatient referral needed: Reasons to return to clinic	New	Distinction between lower UTI and pyelonephritis. Minimal age threshold of 24 months to identify UTI or pyelonephritis via urinary symptoms (dysuria).	Adapted	STGC 2018 p. 204	Lower UTI (cystitis) can be safely treated with a shorter course and a less broad spectrum antibiotic compared to upper UTI (Tulus et al., 2020) Identification of UTI or pyelonephritis based on symptoms of dysuria starting at age 2 years (Raszka et al., 2005)
	Dysmenorrhea	Female sex AND Age ≥8y AND Menarche AND Menstruating Now AND Very painful menstruation		No	Ibuprofen PO	Conditional		New		Same	STGA 2018 P. 145	
	Pregnancy	Female sex AND Age ≥12y AND History of sexual contact AND Menarche AND Suspicion of pregnancy AND Pregnancy test Positive		Yes (outpatient antenatal follow-up)		Conditional	Pregnancy counselling	New		Same	MAI 2009 p.43	
	Negative pregnancy test	Female sex AND Age ≥12y AND History of sexual contact AND Menarche AND Suspicion of pregnancy AND Pregnancy test Negative		No		Conditional	Safe sex counselling	New		Same	MAI 2009 p.43	

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	Balanitis	Male sex AND Penile redness / swelling OR Genital irritation / pain AND Penile redness / swelling on examination		No	Balanitis symptomatic care	Conditional	Balanitis symptomatic care	New	Added. Not in IMCI or Tanzanian guidelines	NEW		Common but benign conditions with a prevalence up to 20% and can be treated symptomatically by gentle cleaning and hygiene counselling (Perkins et al., 2020) Other references (The Royal Children's Hospital, 2018, Tews & Singer, 2020)
	Pelvic Inflammatory Disease	Female sex AND Age ≥12y AND History of sexual contact AND Lower abdominal pain AND Abnormal vaginal discharge		Yes (if febrile)	Ceftriaxone IM, Doxycycline PO, Metronidazole PO, and Paracetamol PO		Safe sex counselling	New	Ceftriaxone only for one dose, for outpatient treatment, prolonged treatment if referred.	Adapted	STGC 2018 p. 302, STGA 2018 p. 156	PID is a clinical diagnosis and patients can commonly be managed as outpatients, with the goal to prevent or reduce risk of subsequent infertility, pelvic scarring, chronic pain or ectopic pregnancy (Bugg et al., 2016). Treatment recommendations include 1m. cephalosporin, doxycycline and metronidazole (Curry et al., 2019) CDC (St Cyr 2020)
	Presumed Primary Syphilis	Genital lesion AND Age ≥12y AND History of sexual contact AND Primary syphilis lesion AND Syphilis rapid test unavailable		No	Benzathine Penicillin IM (2nd line Doxycycline)	Conditional	Safe sex counselling	New	Added Syphilis rapid test if available	Adapted	STGA 2018 p. 164	Treatment (CDC/Workowski 2015)
	Primary syphilis	Genital lesion AND Age ≥12y AND History of sexual contact AND Primary syphilis lesion AND Syphilis rapid test positive		No	Benzathine Penicillin IM (2nd line Doxycycline)	Conditional	Safe sex counselling	New	Added Syphilis rapid test if available	Adapted	STGA 2018 p. 164	Treatment (CDC/Workowski 2015)
	Genital herpes	Genital lesion AND Age ≥12y AND History of sexual contact AND Genital HSV lesion		No	Acyclovir PO	Conditional	Safe sex counselling	New		Same	STGC 2018 P. 308	
	Inguinal Bubo (LGV/Chancroid)	Age ≥12y AND History of sexual contact AND Inguinal Bubo		No	Azithromycin PO, Doxycycline PO	Conditional	Safe sex counselling	New		Same	STGC 2018 P. 310 / STGA 2018 p. 162	
	Urethral Discharge syndrome	Male sex AND Age ≥12y AND History of sexual contact AND Urethral discharge		No	Ceftriaxone IM, Doxycycline PO	Conditional	Safe sex counselling	New	Switched Cefixime for ceftriaxone (cefixime rarely available in primary health facilities)	Adapted	STGC 2018 P. 297 / STGA 2018 p. 155	Treatment (CDC (St Cyr 2020), CDC (Workowski 2015))
	Vaginal Discharge syndrome	Female sex AND Age ≥12y AND History of sexual contact AND Abnormal vaginal discharge AND NOT Fever AND NOT Cottage-cheese-like/curdlike discharge	Pelvic Inflammatory Disease	No	Ceftriaxone IM stat, Doxycycline PO, and Metronidazole PO	Conditional	Safe sex counselling	New	Switched Cefixime for ceftriaxone (cefixime rarely available in primary health facilities)	Adapted	STGC 2018 P. 297 / STGA 2018 p. 155	Treatment (CDC (St Cyr 2020), CDC (Workowski 2015))
	Vaginal Candidiasis	Female sex AND Age ≥8y AND Abnormal vaginal discharge AND Cottage-cheese-like/curdlike discharge AND NOT Fever		No	Clotrimazole cream 1% (genital) (2nd line Fluconazole PO)	Conditional		New	None	Same	STGA 2018 P. 173	
	Vulvovaginitis	Female sex AND Age ≥24m AND No History of sexual contact AND Genital itching / burning OR Abnormal vaginal discharge OR Dysuria AND NOT Fever AND Non-pathological urine analysis (performed in those with dysuria)	Vaginal candidiasis	No	If no improvement after hygiene counselling: PO Metronidazole 20mg/kg/day divided into 2 doses for 7 days (10mg/kg/dose two times a day x 7d)	Conditional	Vulvovaginitis care	New	Part of vaginal discharge syndrome in Tanzania Standard Treatment Guidelines P. 298, however this diagnosis separates conditions that are not due to STIs. Most cases of bacterial vaginitis resolve spontaneously with hygiene counselling, treatment therefore withheld to only those with persisting symptoms despite modification to hygiene.	Adapted	STGC 2018 p. 298	Joshay et al. BMJ 2005; Eckert, Linda. NEJM. 2006
	Inguinal hernia	Male sex AND Painful swelling of groin (symptom) AND Inguinal / groin tenderness on examination		If severe pain / reduction not possible - urgent - specialist outpatient (surgical)	PO Paracetamol 40-80 mg/Kg/day divided into 4 doses x 2-5 days (10-20mg/kg/dose four times a day x 2-5d) Manual reduction of hernia	Conditional	If severe pain or reduction of hernia not possible - Refer urgently for inpatient management If severe pain or reduction of hernia possible - Refer for specialized outpatient management. Surgical	New	In line with STGC	Same	STGC 2018 p. 236	Manual reduction of hernia is safe and effective as initial management (East et al., 2020)
	Suspected Testicular Torsion	Male sex AND Genital problem AND Scrotal pain AND Testicular tenderness		Yes - urgent	Pre-referral PO Paracetamol 40-80 mg/Kg/day divided into 4 doses x 2-5 days (10-20mg/kg/dose four times a day x 2-5d) Manual detorsion of testis		Refer urgently for inpatient management Referral	New	In line with IMAI 2009	Same	MAI 2009 p.27	Urological history and physical examination including identification of unilateral painful and hard/swelling testis is highly accurate for diagnosis of suspected torsion for non-urological provider (Sheh et al., 2016) and preoperative manual detorsion can improve surgical salvage therapy (Cabral Dias Filho et al., 2017)
Ear/Nose/Mouth/Throat	Mastoiditis	Ear problem AND Ear discharge (any duration) OR Ear Pain AND Tender swelling behind ear OR Protrusion of auricula		Yes - urgent	Pre-referral: IV Ampicillin 200mg/Kg/day divided in 4 doses for 1 days (50mg/kg/dose four times a day x 1d) AND IV Gentamicin 7mg/Kg/day divided into 1 dose for 1 days (7mg/kg/dose daily x 1d) (if Amp & Gent not available) IV Ceftriaxone 50mg/kg/day divided into 1 dose for 1 days (50mg/kg/dose daily x 1d) Oral Ciprofloxacin 0.3% ear drops x 3 drops, twice a day for 10 days PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days (10-20mg/kg/dose four times a day x 2-5d)		Refer urgently for inpatient management	New	None	Same	In line with STGA 2018 p.218, and IMCI 2014, and IMCI TZ 2020	
	Complicated Acute Ear Infection	Ear problem AND (Ear discharge <14 days OR Ear Pain AND (bilateral ear pain AND age <24m) OR severe consecutive times a day OR measles rash)	Mastoiditis	No	PO Amoxicillin HD 75-100mg/Kg/day divided in 2 doses for 5 days (37.5-50mg/Kg/dose two times a day x 5d) (if Amox not available) PO Azithromycin 10mg/kg/day in 1 dose for 3 days (10mg/kg/dose daily x 3d) PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days (10-20mg/kg/dose four times a day x 2-5d)	Conditional	Dry the ear by wicking (if ear discharge present) No inpatient referral needed: Reasons to return to clinic	New	Antibiotics only to selected patients with complicated acute otitis media	Adapted	STGA 2018 p. 217 / STGC 2018 p. 242	Cochrane review identified 13 RCTs (3401 children and 3938 acute otitis media episodes) from high income countries, and found that antibiotics often have little benefit (Venekamp, Sanders, Glasziou, Del Mar, & Rovers, 2015). Many guidelines recommend to restrain antibiotic prescription to limited circumstances (National Institute for Health and Care Excellence, 2018; Lieberthal et al., AAP, 2013)
	Uncomplicated Acute Ear Infection	Ear problem AND Ear Pain	Mastoiditis / complicated acute ear infection / Mumps / Dental abscess	No	Oral Ciprofloxacin 0.3% ear drops x 3 drops, twice a day for 10 days PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days (10-20mg/kg/dose four times a day x 2-5d) Dry the ear by wicking	Conditional	No inpatient referral needed: Reasons to return to clinic Explain why oral antibiotics are not useful for this patient	New	As above	Adapted	STGA 2018 p. 217 / STGC 2018 p. 242	As above
	Complicated Chronic Ear Infection	Ear problem AND Ear discharge >14 days AND Hearing loss OR Ear foreign body	Mastoiditis	Yes - to ear specialist	Oral Ciprofloxacin 0.3% ear drops x 3 drops, twice a day for 14 days PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days (10-20mg/kg/dose four times a day x 2-5d)	Conditional	Refer for specialized outpatient management: Ear, nose, and throat	New	Added based on expert panel to identify those that need outpatient specialized management	Adapted	STGA 2018 P. 218 / STGC 2018 P. 256 / IMCI 2014	

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Chronic Ear Infection	Ear problem AND Ear discharge >14 days		Mastoiditis / complicated chronic ear infection		Otic Ciprofloxacin 0.3% ear drops x 3 drops, twice a day for 14 days PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	No inpatient referral needed: Reasons to return to clinic Dry the ear by wicking Explain why oral antibiotics are not useful for this patient	New	Only topical antibiotics in line with IMCI 2014	Same	STGA 2018 P. 218 / STGC 2018 P. 256 / IMCI 2014	
Foreign body in ear	Ear problem AND Suspicion of foreign body in ear AND Foreign body seen in ear			If unable to remove object OR object not visible	Removal of object if possible If lesion seen: Otic Ciprofloxacin 0.3% ear drops x 3 drops, twice a day for 10 days	Conditional	If unable to remove object: Refer for specialized outpatient management: Ear, nose, and throat If able to remove object: No inpatient referral needed: Reasons to return to clinic	New	In line with STGC 2018	Same	STGC 2018 p.249	
Dental Abscess	Mouth or Tooth problem AND Tooth pain AND Dental abscess seen			Yes - to dentist	If Fever: PO Co-Amoxicillin/Clavulanic acid 80-100mg/kg/day divided into 2 doses for 7-14 days [40-50mg/kg/dose two times a day x 7-14d] (if co-Amo/Clav not available) PO Amoxicillin 50mg/Kg/day divided in 2 doses for 7-14 days [25mg/Kg/dose two times a day x 7-14d] (if co-Amo/Clav not available) PO Metronidazole 20mg/Kg/day divided into 2 doses for 7-14 days [10mg/Kg/dose two times a day x 7-14d] PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	Dental abscess drainage and incision Refer for specialized outpatient management: Dentist	Adapted	Amoxicillin given without metronidazole in non severe cases	Adapted	STGC p. 206	Chow, 2020
Tooth pain	Mouth or Tooth problem AND Tooth pain		Dental abscess	Yes - non-urgent to dentist	PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	Refer for specialized outpatient management: Dentist	New	Generic diagnosis for multiple diagnoses except abscess needing referral for dental care (Dental caries, dental trauma)	Same	STGC 2018 p.182 and 185	
Oral aphthous ulcers	Mouth pain OR Eating less than usual OR Sore throat AND Mouth ulcers (painful, shallow) OR Herpangina (vesicles in mouth)			No	PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d] Topical Gentian Violet (half strength - 0.25%) two times a day for 5 days	Conditional	Oral aphthous ulcer advised No inpatient referral needed: Reasons to return to clinic	NEW	In line with IMCI 2014 guidance for oral aphthous ulcers	Same	In line with IMCI 2014	
Oral Candidiasis (Oral thrush)	Mouth / tooth problem OR (2m-5y) Eating / breastfeeding a lot less than usual (asked within CC General) AND White plaques in the mouth			No	PO Nystatin 100,000IU four times a day for 14 days (saug) 147 (if Nystatin not available) PO Miconazole 2% 5ml twice a day for 14 days IF HIV, malnutrition: failed nystatin Tx: PO Fluconazole 6-12mg/Kg/day in 1 dose for 7 days [6-12mg/kg/dose daily x7d]	Conditional	No inpatient referral needed: Reasons to return to clinic Oral thrush/candidiasis counselling if mother is breastfeeding the child	New	In line with STGA 2018	Same	STGA 2018 P. 237	
Bacterial Acute Pharyngitis	Age ≥3 y AND Sore throat AND Cape Town Clinical Decision Rule score ≥3 points (Tonsillar swelling = 2 (mandatory) Tonsillar exudate = 1 / No cough = 1 / No runny nose = 1)			No	PO Amoxicillin 50mg/Kg/day divided in 2 doses for 5 days [25mg/Kg/dose two times a day x 5d] (if Amox not available) PO Penicillin V 100mg/Kg/day divided in 2 doses for 5 days [50mg/kg/dose two times a day x 5d] PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	No inpatient referral needed: Reasons to return to clinic	New	Use of Cape Town Clinical decision rule as selected by TZ expert panel to decide who should receive antibiotics	Adapted	STGC 2018 P. 248	Cape Town Clinical Decision Rule (Engel et al., 2017)
Viral Acute Pharyngitis	Age ≥3 y AND Sore throat AND Cape Town Clinical Decision Rule score <3 points (Tonsillar swelling = 2 / Tonsillar exudate = 1 / No cough = 1 / No runny nose = 1)			No	PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	Common cold or upper respiratory tract infection: Symptomatic care No inpatient referral needed: Reasons to return to clinic Explain why oral antibiotics are not useful for this patient	New	As above	Adapted	STGC 2018 P. 248	
Complicated Neck mass	Neck mass ≥3cm OR Neck mass ≥4 weeks			Yes - specialist outpatient (including TB investigation)	If Fever: PO Ampiclox 50-150mg/kg/day divided in 3 doses for 1 days [17-50mg/kg/dose three times a day x 1d] (if Ampiclox not available) PO Azithromycin 10mg/kg/day in 1 dose for 1 days [10mg/kg/dose daily x 1d]		Withhold antibiotics before TB assessment if possible Refer for specialized outpatient investigation: neck mass	Adapted	Added. Not in IMCI or Tanzanian guidelines; however in IMCI TZ 2020 looking for lymph nodes as part of the screening process for tuberculosis	Adapted	IMCI TZ 2020	Meier et al. Am Fam Physician 2014
Uncomplicated infectious lymphadenitis	Neck mass <3cm AND Neck mass <4 weeks AND Local tenderness or redness		Bacterial or viral acute pharyngitis	No	If Fever: PO Ampiclox 50-150mg/kg/day divided in 3 doses for 10 days [17-50mg/kg/dose three times a day x 10d] (if Ampiclox not available) PO Azithromycin 10mg/kg/day in 1 dose for 10 days [10mg/kg/dose daily x 10d] PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	No inpatient referral needed: Reasons to return to clinic	Adapted	Added. Not in IMCI or Tanzanian guidelines	NEW	Added. Not in IMCI or Tanzanian guidelines	Meier et al. Am Fam Physician 2014
Uncomplicated lymphadenopathy	Neck mass <3cm AND Neck mass <4 weeks AND NO Local tenderness or redness		Bacterial or viral acute pharyngitis	No	PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	No inpatient referral needed: Reasons to return to clinic	Adapted	Added. Not in IMCI or Tanzanian guidelines	New	Added. Not in IMCI or Tanzanian guidelines	Meier et al. Am Fam Physician 2014
Mumps	Cheek swelling AND Suspicion of mumps			No	PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	Common cold or upper respiratory tract infection: Symptomatic care Ensure adequate fluid and calorie intake No inpatient referral needed: Reasons to return to clinic	New	Added based on suggestion by TZ clinical expert panel	New	Not in IMCI or Tanzanian guidelines	Albrecht, 2020
Bacterial Conjunctivitis	Red eye AND NOT Eye trauma / foreign body AND Sticky eye / purulent discharge from eye		Measles, severe eye disease, severe eye disease	Yes - if no improvement despite 5 days of antibiotic eye drops	Ocular Chloramphenicol 0.5% eye drops, 1 drop every 3 hours for 5 days (if Chloramphenicol not available) Ocular Ciprofloxacin 0.3% ear drops x 3 drops, twice a day for 5 days	Conditional	If follow-up visit and already 5 days of antibiotics completed: Refer for specialized outpatient management: Ophthalmology No inpatient referral needed: Reasons to return to clinic	New	Dx. Added No PX foreign body.	Adapted	STGC 2018 P. 178	- Glued-eye / Sticky eye good predictor of bacterial conjunctivitis (van Weert, Tellegen & ter Riet, 2013) - Systematic review for diagnosis and treatment for red eye (Azari & Barney, 2013) - acute bacterial conjunctivitis is frequently self limiting, however the use of antibiotic eye drops is associated with modestly improved rates of clinical and microbiological remission in comparison to placebo. (Sheikh, Hamed, van Schayck, McLean, & Nurmatov, 2012).
Viral Conjunctivitis	Red eye AND NOT Eye trauma / foreign body AND NOT Sticky eye / purulent discharge from eye AND NOT Itchy eye (only ≥5 years)		Corneal abrasion measles severe eye disease	No	Conjunctivitis guidance	Conditional	Conjunctivitis guidance No inpatient referral needed: Reasons to return to clinic	New	Adapted diagnostic criteria from STGC 2018, excluding eye trauma/foreign body, sticky eye and mucopurulent discharge from eye	Adapted	STGC 2018 P. 178	- Systematic review for diagnosis and treatment for red eye (Azari & Barney, 2013) - Up to 80% of all cases of conjunctivitis in the acute setting are due to viral infections and are highly contagious, highlighting the importance of hygiene measures (Azari et al., 2013)

Complaint category	DIAGNOSIS	ePOCT+ DYN TZ Algo	Excluded by	Referral	TREATMENTS	Follow-up (always includes reasons to return to clinic)	Management	Difference with ePOCT 2014 algorithm (New, Adapted, Same)	Modifications in respect to TZ guidelines: Standard Treatment Guidelines and Essential Medicines List for Children and Adolescents 2018 (STGC 2018, or IMCI 2014 (TZ IMCI 2020), or IMAI 2009)	In line with Tanzania guidelines and/or IMCI? (YES, Adapted from TZ guidelines), NEW = Not in TZ guideline)	TZ or IMCI/MAI Guidelines	Additional references
	Allergic Conjunctivitis	Age ≥5 years AND Red eye AND NOT Eye trauma / foreign body AND NOT Sticky eye / purulent discharge from eye AND itchy eye	Measles, severe eye disease, corneal abrasion	No	Sodium chromoglycate 2.4% eye drops	Conditional		New	No slit lamp examination as proposed in STGC.	Adapted	STGC 2018 p. 177	<ul style="list-style-type: none"> Systematic review for diagnosis and treatment for red eye (Azar & Barney, 2013) Allergic conjunctivitis is an increasing condition, affecting up to 40% of the population in US, and redness with itching are the most common symptoms (Azari et al., 2015). A community-based study in Ghana reported a prevalence of 39.9% and thus identified AC as an endemic ocular disease (Kumah et al., 2015). Although it is rarely a severe condition, timely identification and treatment of AC is crucial as it has a considerable effect on quality of life (Palmares et al., 2010)
	Orbital Cellulitis	Warm tender swelling around eye / eyelid Fever OR Eye pain		Yes - urgent	Pre-referral: PO Ampiclox 50-150mg/kg/day divided in 3 doses for 1 days [17-50mg/kg/dose three times a day x 1d] (if ampiclox not available) PO Erythromycin 50mg/kg/day divided into 3 doses for 1 days [17mg/kg/dose three times a day x1d]		Refer urgently for inpatient management	New	Adapted from STGC 2018 to identify preseptal versus orbital cellulitis.	Adapted	STGC 2018 P. 179	<ul style="list-style-type: none"> Predictors to distinguish preseptal from orbital cellulitis (Ekhlassi & Becker, 2017; Sciametta et al., 2017) Acute sinusitis is a common childhood disorder, but can progress into complicated conditions with orbital complications accounting for up to 85% of all acute sinusitis complications (Suhaili et al., 2010) Prompt recognition of both preseptal and orbital cellulitis is required to avoid potential serious sequelae such as blindness, intracranial infection and even death (Suhaili et al., 2010) Orbital cellulitis constituted 6.2% of all ocular emergency admissions in a retrospective Nigerian study in 2012 (Balogun et al., 2012)
	Preseptal Cellulitis	Oedema of eyelid OR Redness / swelling around eye AND NOT Fever AND NOT Eye pain		IF <12 months old	PO Ampiclox 50-150mg/kg/day divided in 3 doses for 10 days [17-50mg/kg/dose three times a day x 10d] (if ampiclox not available) PO Erythromycin 50mg/kg/day divided into 3 doses for 10 days [17mg/kg/dose three times a day x10d]	Conditional	IF <12mth: Refer urgently for inpatient management IF ≥12mth: No inpatient referral needed: Reasons to return to clinic	New	As above	Adapted	STGC 2018 P. 179	Preseptal cellulitis is more common and less severe than orbital cellulitis, and the absence of eye pain on extraocular movement can help to distinguish preseptal cellulitis from orbital cellulitis (Ekhlassi et al., 2017)
	Severe Eye Disease	Clouding of cornea OR Severe eye pain OR bleeding of eye OR red eye > 2 weeks OR intumes eyelashes OR Loss of vision		Yes - IF severe eye pain = urgent / IF NOT severe eye pain = specialist outpatient referral	Occular Chloramphenicol eye drops x1 drop, every 3 hours for 5 days (if Chloramphenicol not available) Occular Ciprofloxacin 0.3% EYE drops x 3 drops, twice a day for 5 days IF clouding of cornea and measles in last 3 months and no Vitamin A in past month (or not currently on RUT): PO Vitamin A 3 doses Day 0, 1, 14 - (Fixed dose: Age <6mth = 50,000IU / 6-12mth = 100,000IU / =>12mth = 200,000IU) Pre-referral IF severe eye pain: PO Paracetamol 40-100 mg/Kg/day divided into 4 doses for 1 days [10-20mg/kg/dose four times a day x1d]		IF severe eye pain: Refer for specialized outpatient management: Ophthalmology Refer urgently for inpatient management	New	Generic diagnosis for severe eye diseases requiring referral for further expert assessment including trachoma, retinoblastoma, eye injury, congenital glaucoma, uveitis, and foreign body. IMCI TZ 2020: Also includes eye injury which is integrated in corneal abrasion, abnormal appearing eye which is integrated in orbital and preseptal cellulitis with the eyelid edema. Strabismus is included in IMCI TZ 2020 but not included here.	YES	STGC 2018 P. 164, 165, 170, 172, 175; IMCI TZ 2020	The diagnosis of the entity grouped as "severe eye disease" aims to detect and refer severe conditions including Trachoma, Glaucoma, severe ocular infection, trauma or inflammation. In a study from Bangladesh, the prevalence of ocular morbovitas a daily and childhood blindness was 5.63% (Hussain et al., 2019)
	Corneal Abrasion	Red eye AND Eye trauma / foreign body		IF foreign body present and removal not possible - specialist outpatient	IF foreign body - removal of foreign body from eye if possible Occular Chloramphenicol 0.5% eye drops x1 drop, every 3 hours for 5 days (if Chloramphenicol not available) Occular Ciprofloxacin 0.3% ear drops x 3 drops, twice a day for 5 days	Conditional	if unable to remove foreign body: refer to outpatient ophthalmology No inpatient referral needed: Reasons to return to clinic	New	Adapted from Corneal ulcer in STGC 2018 without the use of slit lamp examination, and IMCI TZ 2020 (eye injury)	Adapted	STGC 2018 P. 171, IMCI TZ 2020	<ul style="list-style-type: none"> Corneal abrasion and specifically corneal and conjunctival injury from a foreign body are common ocular injury (Jolly et al., 2018; Zimmerman et al., 2019) if the removal of a foreign body is possible, the treatment can be done in an ambulatory setting (Franken et al., 2017) Trachoma is highly prevalent in Sub-Saharan Africa (Taylor et al. Lancet 2014)
	Skin Complicated abscess	Abscess seen AND NOT (<12m old AND Peri-anal abscess) AND Fever OR Abscess size >5cm OR Facial abscess OR Large area of warm, pink and tender skin around abscess		IF unable to drain at health facility	PO Ampiclox 50-150mg/kg/day divided in 3 doses for 7 days [17-50mg/kg/dose three times a day x 7d] (if ampiclox not available) PO Erythromycin 50mg/kg/day divided into 3 doses for 7 days [17mg/kg/dose three times a day x7d] PO Paracetamol 40-100 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	IF able to drain at health facility: Abscess Care No inpatient referral needed: Reasons to return to clinic IF unable to drain at health facility. Refer for specialized outpatient management: Surgical Ensure adequate fluid and calorie intake	Adapted	In line with STGC	Adapted	STGC p. 238	Antibiotics in those with fever or when drainage is not possible. Other signs of SIRS would be captured through other algorithms (Stevens et al. CID, 2014)
	Simple abscess	Abscess seen	Complicated abscess		IF unable to drain at health facility: PO Ampiclox 50-150mg/kg/day divided in 3 doses for 7 days [17-50mg/kg/dose three times a day x 7d] (if Ampiclox not available) PO Co-Amoxicillin/Clavulanic acid 80-100mg/kg/day divided into 2 doses for 7 days [40-50mg/kg/dose two times a day x 7d] PO Paracetamol 40-100 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	No inpatient referral needed: Reasons to return to clinic Ensure adequate fluid and calorie intake	Adapted	Only antibiotics for complicated abscess or those for which drainage is not possible.	Adapted	STGC p. 238	idem
	Complicated cellulitis	Cellulitis seen AND Facial cellulitis OR Severe pain around OR Size >2x child's palm OR Danger sign OR No improvement after 72hrs of antibiotics		Yes - for evaluation for parenteral antibiotics	Pre-referral PO Ampiclox 50-150mg/kg/day divided in 3 doses for 1 days [17-50mg/kg/dose three times a day x 1d] (if Ampiclox not available) PO Erythromycin 50mg/kg/day divided into 3 doses for 1 days [17mg/kg/dose three times a day x 1d] PO Paracetamol 40-100 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]		Ensure adequate fluid and calorie intake Refer for evaluation for parenteral antibiotic TT	Adapted		Yes	STGC p. 251	
	Uncomplicated Cellulitis	Cellulitis seen AND NO Abscess seen	Complicated cellulitis	No	PO Ampiclox 50-150mg/kg/day divided in 3 doses for 7-14 days [17-50mg/kg/dose three times a day x 7-14d] (if Ampiclox not available) PO Erythromycin 50mg/kg/day divided into 3 doses for 7-14 days [17mg/kg/dose three times a day x 7-14d] PO Paracetamol 40-100 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	Ensure adequate fluid and calorie intake No referral: Follow up in 7 days	Adapted	IV antibiotics only for severe/complicated cases, the rest would be treated with PO antibiotics.	Adapted	STGC p. 251	Oral antibiotics appropriate for uncomplicated cellulitis (Stevens et al. CID, 2014)
	Severe complicated measles	Measles rash seen AND Danger signs OR Severe pneumonia OR Deep / extensive mouth ulcers OR Clouding of the cornea OR Severe malnutrition OR Severe pneumonia OR Chest indrawing pneumonia OR HIV OR Cerebral palsy OR Sickle cell disease OR Congenital heart disease		Yes AND Report (notifiable disease)	MMV Ampicillin 200mg/kg/day divided in 4 doses for 1 days [50mg/kg/dose four times a day x 1d] MMV Gentamicin 7mg/Kg/day divided into 1 dose for 1 days [7mg/kg/dose daily x 1d] (if Amp & Gent not available) MMV Ceftriaxone 50mg/kg/day divided into 1 dose for 1 days [50mg/kg/dose daily x 1d] PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d] IF mouth ulcers: Topical Gentian Violet (half strength - 0.25%) for inside mouth two times a day for 5 days IF pus from eye and clouding of cornea: Occular Tetracycline eye drops x1 drop, every 6 hours for 7-14 days IF no Vit A in last month, and not already on: PO Vitamin A (treatment) 2-3 doses Day 0 & 1 & (if cornea clouding) 14 - (Fixed dose: Age <6mth = 50,000IU / 6-12mth = 100,000IU / =>12mth = 200,000IU)		Report for surveillance data Refer urgently for inpatient management	Adapted	In line with IMCI 2014, IMCI TZ 2020	Yes	STGC p. 324, IMCI 2014, IMCI TZ 2020	

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	Measles with eye or mouth complications	Measles rash seen AND Mouth ulcers (NOT deep / extensive) OR (Pus draining from eye AND NO clouding of cornea)		No Report (notifiable disease)	PO Paracetamol 40-100 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d] IF mouth ulcers: Topical Gentian Violet (half strength - 0.25%) for inside mouth two times a day for 5 days IF pus from eye: Ocular Tetracycline eye drops x1 drop, every 6 hours for 7-14 days IF no Vit A in last month, and not already on RUTF: PO Vitamin A (treatment) 2 doses / Day 1 & 2 / Fixed dose: Age <6mth = 50,000IU / 6-12mth = 100,000IU / >=12mth = 200,000IU	Conditional	Ensure adequate fluid and calorie intake Report for surveillance data Explain why oral antibiotics are not useful for this patient	Adapted	In line with IMCI 2014, IMCI TZ 2020	Yes	STGC p. 324, IMCI 2014, IMCI TZ 2020	
	Non-severe measles	Measles rash seen	Severe complicated measles Measles with eye or mouth complications	No Report (notifiable disease)	PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d] IF no Vit A in last month, and not already on RUTF: PO Vitamin A (treatment) 2 doses / Day 1 & 2 / Fixed dose: Age <6mth = 50,000IU / 6-12mth = 100,000IU / >=12mth = 200,000IU	Conditional	Explain why oral antibiotics are not useful for this patient Report for surveillance data Ensure adequate fluid and calorie intake	Same	In line with IMCI 2014, IMCI TZ 2020, and STGC	YES	STGC p. 324, IMCI 2014, IMCI TZ 2020	
	Complicated chicken pox	Chicken pox lesions AND HIV OR <=3.2 score WFA/WHI OR <11.5 cm MUAC OR Cellulitis OR Severe pneumonia OR chest indrawing pneumonia)		Yes - urgent	PO Acyclovir (chicken pox) 60-80mg/kg/day divided into 3 doses for 5 days [27mg/kg/dose three times a day x 5d] PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d] Topical Calamine lotion application x1, daily for 5 days		Refer urgently for inpatient management	Adapted	Identified particular patients that could benefit from acyclovir treatment	Adapted	STGC p. 259	
	Uncomplicated chicken pox	Chicken pox lesions	Complicated chicken pox	No	PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d] Topical Calamine lotion application x1, daily for 5 days	Conditional	Explain why oral antibiotics are not useful for this patient Ensure adequate fluid and calorie intake No inpatient referral needed: Reasons to return to clinic Skin hygiene precautions	Same	In line with STGC	YES	STGC p. 259	
	Non specific viral rash	Non-specific viral rash seen		No	PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	Ensure adequate fluid and calorie intake Non specific viral rash guidance	New	Added. Not in IMCI or Tanzanian guidelines	NEW		Non-specific viral rash in childhood is common, mostly harmless and self limiting (Kroepfel et al., 2019). In a study reviewing 347 pediatric dermatology consultations in the pediatric emergency department, the most common condition was associated with an infectious disease (Moon et al., 2016).
	Scarlet Fever	Age >=12m AND Scarlet fever rash seen		No	PO Amoxicillin 50mg/Kg/day divided in 2 doses for 5 days [25mg/Kg/dose two times a day x 5d] (If Amox not available) PO Penicillin V 100mg/Kg/day divided in 2 doses for 5 days [50mg/Kg/dose two times a day x 5d] PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	No inpatient referral needed: Reasons to return to clinic Ensure adequate fluid and calorie intake	New	Added. Not in IMCI or Tanzanian guidelines	NEW		The burden of Group A Streptococci (GAS) sequelae including rheumatic fever and rheumatic heart disease is high in Sub-Saharan Africa (DeWijer et al., 2020). A prospective Tanzanian study demonstrated that GAS infections were among the most common bacterial infections diagnosed in children with uncomplicated fever (Elving et al., 2016)
	Anaphylaxis	Urticarial lesions seen AND Danger signs OR Respiratory distress OR Anaphylaxis		Yes	Pre-referral IM Epinephrine 0.01mg/Kg x 1dose pre-referral IF >6mth: PO Cetirizine PO daily for 1 days (Fixed dose: 6mth-2yr = 2.5mg / 2-5yr = 5mg) (If Cetirizine not available & Age >=2yr) PO Chlorpheniramine 2mg twice a day for 1 days IF <=2mth: PO Cetirizine PO daily for 1-5 days (Fixed dose: 6mth-2yr = 2.5mg / 2-5yr = 5mg) (If Cetirizine not available & Age >=2yr) PO Chlorpheniramine 2mg twice a day for 1-5 days		Refer urgently for inpatient management	New	Adapted to STGA and STGC	Adapted	STGA p. 179	Specified diagnostic criteria based on the Second National Institute of Allergy and Infectious Disease/Food Allergy and Anaphylaxis Network symposium (Sampson et al. 2006)
	Urticaria	Urticarial lesions seen	Anaphylaxis	No	IF <=2mth: PO Cetirizine PO daily for 1-5 days (Fixed dose: 6mth-2yr = 2.5mg / 2-5yr = 5mg) (If Cetirizine not available & Age >=2yr) PO Chlorpheniramine 2mg twice a day for 1-5 days	Conditional	No inpatient referral needed: Reasons to return to clinic	Same	In line with STGC	YES	STGC p. 266	
	Eczema (Atopic dermatitis)	Eczematous lesions seen		No	Topical Hydrocortisone 0.5-1% twice a day for 14 days (If Hydrocortisone not available) Topical Betamethason 0.1% twice a day for 14 days	Conditional	Eczema guidance No inpatient referral needed: Reasons to return to clinic	Same	Same as Tanzanian standard treatment guideline but no anti-histamine.	YES	STGC p. 265	No anti-histamine based on cochrane review (Matteme et al. 2019)
	Heat rash (Miliaria crystallina/rubra)	Heat rash seen		No		Conditional	Heat rash guidance No inpatient referral needed: Reasons to return to clinic	New	Added. Not in IMCI or Tanzanian guidelines	NEW		Miliaria are self limiting or require symptomatic therapy and are caused by sweat retention (Zunga et al., 2019)
	Diaper rash	Diaper rash			Topical Potassium Permanganate 1:4000 (0.025%) 50ml twice a day for 7 days (If Potassium permanganate not available) Topical Cloxacazole 1% every 6 hours for 7 days	Conditional	No inpatient referral needed: Reasons to return to clinic Diaper rash guidance	New	No particular treatment, as there is no evidence based on 2005 cochrane review.	Adapted	STGC p. 254	No study that supported the treatment of diaper rash in 2005 cochrane review (Davies et al. 2005)
	Complicated Impetigo	Impetigo OR Bullous Impetigo OR Ecthyma lesion AND Fever OR Lesion size >1x patient's palm		No	PO Ampiclox 50-150mg/kg/day divided in 3 doses for 5 days [17-50mg/kg/dose three times a day x 5d] (If Ampiclox not available) PO Erythromycin 50mg/kg/day divided into 3 doses for 5 days [17mg/kg/dose three times a day x 5d] IF <=2mth: Topical Potassium Permanganate 1:4000 (0.025%) 50ml twice a day for 5 days (If Potassium Perm not available) Topical Mupirocin 2% twice a day for 5 days PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	Ensure adequate fluid and calorie intake No inpatient referral needed: Reasons to return to clinic Skin hygiene precautions	New	Limit investigations as appropriate to primary care (no culture, FBP or CRP), management globally in line with STGC.	Adapted	STGC p. 252	Criteria for oral antibiotic treatment (Stevens et al. 2014, Raff et al. 2016)
	Uncomplicated Impetigo	Impetigo OR Bullous Impetigo OR Ecthyma lesion AND NO Fever AND Lesion size <1x patient's palm		No	IF <=2mth: Topical Potassium Permanganate 1:4000 (0.025%) 50ml twice a day for 5 days (If Potassium Perm not available) Topical Mupirocin 2% twice a day for 5 days PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d] PO Ampiclox 50-150mg/kg/day divided in 3 doses for 7 days [17-50mg/kg/dose three times a day x 7d] (If Ampiclox not available) PO Erythromycin 50mg/kg/day divided into 3 doses for 7 days [17mg/kg/dose three times a day x 7d]	Conditional	No inpatient referral needed: Reasons to return to clinic Skin hygiene precautions	Adapted	Limit investigations as appropriate to primary care (no culture, FBP or CRP), management globally in line with STGC.	Adapted	STGC p. 252	See above
	Extensive folliculitis	Folliculitis seen AND Extensive skin disease		No	IF <=2yr: Topical Gentian Violet (full strength - 0.5%) twice a day for 7 days (If Gentian Violet not available) Topical Silver Sulfadiazine 1% to affected area twice a day for 5 days IF >=2yr: Topical Potassium Permanganate 1:4000 (0.025%) 50ml twice a day for 4 days	Conditional	No inpatient referral needed: Reasons to return to clinic	New	No gram stain, culture and sensitivity in line with routine care at primary care. Differentiation between those needing antibiotics and those not.	Adapted	STGC p. 253	Uncomplicated folliculitis can be treated topically, extensive folliculitis or furuncles with oral antibiotics (Skuberg et al., 2002). Treatment of choice are beta-lactams, which are beneficial even in regions where community-acquired MRSA is endemic (Elliott et al., 2009)
	Folliculitis	Folliculitis seen	Extensive folliculitis	No	IF <=2yr: Topical Gentian Violet (full strength - 0.5%) twice a day for 5 days (If Gentian Violet not available) Topical Silver Sulfadiazine 1% to affected area twice a day for 5 days	Conditional	No inpatient referral needed: Reasons to return to clinic	Adapted	No gram stain, culture and sensitivity in line with routine care at primary care. Differentiation between those needing antibiotics and those not.	Adapted	STGC p. 253	See above

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	Molluscum contagiosum	Molluscum contagiosum seen		No		Conditional	Molluscum contagiosum guidance	New	In line with STGC	YES	STGC p. 261	Treatment. (van der Wouden et al. 2017)
	Herpes simplex - Oral Lesions (Herpes labialis)	Oral herpes simplex seen		No	If HIV / severe malnutrition: PO Acyclovir (HSV) 80mg/kg/day divided into 3 doses for 5 days [27mg/kg/dose three times a day x 5d] PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	Ensure adequate fluid and calorie intake No inpatient referral needed: Reasons to return to clinic Skin hygiene precautions	Adapted	Identified particular patients that could benefit from acyclovir treatment	Adapted	STGC p. 259	Topical acyclovir, penciclovir or docosanol not effective for herpes simplex labialis (Hammer et al. 2018)
	Generalized (extensive) Tinea corporis	Tinea corporis lesions seen AND Extensive skin disease		No	PO Griseofulvin 20mg/Kg/day in 1 dose for 42 days [20mg/Kg/dose daily x42d] (if Griseofulvin not available) PO Fluconazole 6mg/Kg/day in 1 dose for 42 days [6mg/Kg/dose daily x 42d]	Conditional	No inpatient referral needed: Reasons to return to clinic	New	If extensive and generalized, treat with po antifungal instead of topical.	Adapted	STGC p. 256	Treatment of tinea corporis (Sahoo et al. 2016)
	Tinea corporis	Tinea corporis lesions seen AND NOT Extensive skin disease		No	Topical Clotrimazole 1% every 6 hours for 28 days (if Clotrimazole not available) Topical Benzocaine 3-6% twice a day for 28 days	Conditional	None	Same	In line with STGC	YES	STGC p. 256	Treatment of tinea corporis (Sahoo et al. 2016)
	Tinea Capitis	Tinea capitis lesions seen		No	PO Griseofulvin 20mg/Kg/day in 1 dose for 42 days [20mg/Kg/dose daily x42d] (if Griseofulvin not available) PO Fluconazole 6mg/Kg/day in 1 dose for 42 days [6mg/Kg/dose daily x 42d]	Conditional	No inpatient referral needed: Reasons to return to clinic	Same	In line with STGC	YES	STGC p. 257	Treatment of tinea capitis (Chen et al. 2016)
	Scabies	Scabies rash seen		No	Topical Benzyl benzoate 25% once, then repeat in 1 week (if benzyl benzoate not available) Topical Malathion 0.5% (50ml) in one dose and wash off after 8 to 12 hours. Perform another application after two weeks in children with HIV PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	No inpatient referral needed: Reasons to return to clinic Scabies and lice household management advice	Same	In line with STGC	YES	STGC p. 262	Diagnosis and treatment of scabies (Thompson et al. 2017; Sunderkotter et al. 2016; Engelmann et al. 2020)
	Pediculosis (Head lice)	Head lice seen		No	Topical Benzyl benzoate 25% to dry hair for 10-minutes and then rinse off. Repeat second application 1 week apart. (if benzyl benzoate not available) Topical Malathion 0.5% (20ml) to dry hair for 8 to 12 hours before washing off. Repeat second application 1 week apart.	Conditional		New	In line with STGC	YES	STGC p. 263	
Trauma / Accident / Burns / Wounds / Fire exposure / Pain	Osteomyelitis/septic arthritis	Musculo-skeletal pain or swelling (bone or joint pain/swelling) OR limping OR unable to use extremity AND Fever AND Warm, tender or swollen joint or bone (physical exam) AND CRP>40mg/L OR CRP unavailable		Yes - urgent	Pre-referral: M/V Ceftriaxone HD 100mg/kg/day divided into 1 dose for 1 days [100mg/kg/dose daily x 1d] (if Cef not available) IV Amoxicillin / Clavulanic acid 100mg/kg/day divided in 2 doses for 1 days [50mg/kg/dose two times a day x1d] PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 1 days [10-20mg/kg/dose four times a day x 1d]		Refer urgently for inpatient management	Adapted	Same diagnostic predictors including use of CRP, however different TT adapted to peripheral health facilities. (STGC 2018)	Adapted	STGC p. 78	Use of CRP is a sensitive test for diagnosis of infectious cause of bones in children (Peltola et al., NEJM 2014) and fever improves specificity (Kim et al., 2002). CRP included in the Tanzanian standard medical laboratory equipment list at the dispensary and health centre level (MCH, 2018)
	Chronic limp or joint pain	Musculo-skeletal pain or swelling (bone or joint pain/swelling) OR limping OR unable to use extremity AND (NO Fever AND NO History of trauma AND NO Localized joint/bone abnormality OR Fever AND Localized joint/bone abnormality AND CRP <40mg/L) AND Joint pain / Limp >2 weeks		Yes - specialist outpatient	PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	Refer for specialized outpatient consultation: Orthopedics	New	Added. Not in IMCI or Tanzanian guidelines	NEW		Cut-off time for acute vs. chronic limp 2 weeks (Peltola et al., NEJM 2014). Chronic limp DD include Juvenile Idiopathic Arthritis with an incidence rate varying between 1.6 to 23 and prevalence from 3.8 to 400/100,000 (Therly et al., 2014) and represents the most common rheumatic illness in childhood (Syed et al., 2016). Other virus-associated chronic joint pains should be referred for assessment and treatment to reduce morbo-mortality and quality of life (Hossain et al., 2018; Sharma et al., 2016)
	Acute limp or joint pain	Musculo-skeletal pain or swelling (bone or joint pain/swelling) OR limping OR unable to use extremity AND (NOT Fever AND NOT History of trauma AND NO Localized joint/bone abnormality OR Fever AND Localized joint/bone abnormality AND CRP <40mg/L) AND Joint pain / Limp <2 weeks		No	PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	No inpatient referral needed: Reasons to return to clinic	New	Added. Not in IMCI or Tanzanian guidelines	NEW		Acute limp in children is a common complaint with an incidence of 1.8 per 1000, and transient synovitis, which requires symptomatic therapy only, is the main cause (Fischer et al., 1999) after exclusion of high inflammatory marker and/or fever (Kim et al., 2002)
	Complicated deep wound	Deep wound AND Bite wound OR Wound infection OR Fever OR Uncontrolled bleeding		If rabies risk: specialist CP (rabies) If >5% TBSA motor deficit, signs severe infection, or persisting fever or no improvement despite antibiotics refer for urgent inpatient management	Pre-referral: PO Co-Amoxicillin/Clavulanic acid 80-100mg/kg/day divided into 2 doses for 1 days [40-50mg/kg/dose two times a day x 1d] for 1 days [17mg/kg/dose three times a day x 1d] PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 1 days [10-20mg/kg/dose four times a day x 1d]	Conditional	Wound care Tetanus vaccine if incomplete If NO risk of rabies, complicated deep wound needing referral, or persisting fever/no improvement of wound after >72hr antibiotics: No inpatient referral needed: Reasons to return to clinic If risk of rabies: Refer for specialized outpatient consultation: Rabies If complicated deep wound needing referral, or persisting fever/no improvement of wound after >72hr antibiotics: Refer urgently for inpatient management	New	Adapted from General Management of Trauma in STGA	Adapted	STGA p.255	Wound management (Black et al. 2015; World Health Organization, 2010)
	Uncomplicated deep wound	Deep wound AND NO Bite wound AND NO Sign of wound infection AND NO Fever AND NO Uncontrolled bleeding		If suturing needed and not possible - refer specialist CP	PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	Wound care Tetanus vaccine if incomplete No inpatient referral needed: Reasons to return to clinic If suturing needed (clean <24hrs, dirty <6hrs) and suturing possible: suture	New	Adapted from General Management of Trauma in STGA	Adapted	STGA p.255	Wound management (Black et al. 2015; World Health Organization, 2010)

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	Complicated superficial wound	Superficial wound AND Bite wound OR Sign of wound infection OR Fever		If rabies risk: specialist OP (rabies) If persistent fever, no improvement of wound and surrounding skin after >72 hrs antibiotics urgent IP referral	PO Co-Amoxicillin/Clavulanic acid 60-100mg/kg/day divided into 2 doses for 7-10 days [40-50mg/kg/dose two times a day x 7-10d] If Co-AmoxClav not avail) PO Erythromycin 50mg/kg/day divided into 3 doses for 7-10 days [17mg/kg/dose three times a day x 7-10d] PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	Wound care Tetanus vaccine if incomplete If NO risk of rabies, or persisting fever/no improvement of wound after >72hr antibiotics: No inpatient referral needed: Reasons to return to clinic: If risk of rabies: Refer for specialized outpatient consultation: Rabies If persisting fever/no improvement of wound after >72hr antibiotics: Refer urgently for inpatient management	New	Adapted from General Management of Trauma in STGA	Adapted	STGA p.255	Wound management (Black et al. 2015; World Health Organization, 2010)
	Uncomplicated superficial wound	Superficial wound AND NO Bite wound AND NO Wound infection AND NO Fever		No		Conditional	Wound care Tetanus vaccine if incomplete No inpatient referral needed: Reasons to return to clinic	New	Adapted from General Management of Trauma in STGA	Adapted	STGA p.255	Wound management (Black et al. 2015; World Health Organization, 2010)
	Confirmed fracture	Fall / trauma AND Musculoskeletal pain / swelling AND Single joint pain OR extremity pain AND Suspicion of fracture / dislocation AND Xray confirmed fracture		If open fracture, severe pain or deformation: urgent; if not specialist OP	PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d] If open fracture: (pre-referral) M/V Ampicillin 200mg/Kg/day divided in 4 doses for 1 days [50mg/kg/dose four times a day x 1d] AND M/V Gentamicin 7mg/Kg/day divided into 1 dose for 1 days [7mg/kg/dose daily x 1d] (If Amp & Gent not available) M/IV Ceftriaxone 50mg/kg/day divided into 1 dose for 1 days [50mg/kg/dose daily x 1d]	Conditional	Immobilise If Severe pain, deformation, loss of motricity/feeling or open fracture: Refer urgently for inpatient management If NO Severe pain, deformation, loss of motricity/feeling or open fracture: Refer for specialized outpatient consultation: Orthopedics	New	In line with Extremity Fractures in STGA	YES	STGA p.261	
	Confirmed dislocation	Fall / trauma AND Musculoskeletal pain / swelling AND Single joint pain OR extremity pain AND Suspicion of fracture / dislocation AND Xray confirmed dislocation		If unable to manage dislocation: Specialist OP surgical	PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	Dislocation management If unable to manage dislocation: Refer for specialized outpatient consultation: Orthopedics	New	In line with Sprains and strains in STGA	YES	STGA p.260	
	Suspicion of fracture/dislocation	Fall / trauma AND Musculoskeletal pain / swelling AND Single joint pain OR extremity pain AND Suspicion of fracture / dislocation AND Xray unavailable		If open fracture, severe pain or deformation: urgent; if not specialist OP	PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d] If open fracture: (pre-referral): M/V Ampicillin 200mg/Kg/day divided in 4 doses for 1 days [50mg/kg/dose four times a day x 1d] AND M/V Gentamicin 7mg/Kg/day divided into 1 dose for 1 days [7mg/kg/dose daily x 1d] (If Amp & Gent not available) M/IV Ceftriaxone HD 100mg/kg/day divided into 1 dose for 1 days [100mg/kg/dose daily x 1d]	Conditional	Immobilise If Severe pain, deformation, loss of motricity/feeling or open fracture: Refer urgently for inpatient management If NO Severe pain, deformation, loss of motricity/feeling or open fracture: Refer for specialized outpatient consultation: Orthopedics	New	In line with Extremity Fractures in STGA	YES	STGA p.261	
	Clavicular fracture	Fall / trauma AND Musculoskeletal pain / swelling AND Single joint pain OR extremity pain AND Suspicion of fracture / dislocation AND Xray confirmed clavicular fracture		No (but in management gives conditions e.g. open)	PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	Clavicular fracture management No inpatient referral needed: Reasons to return to clinic	New	Adapted from Extremity Fractures in STGA	Adapted	STGA p.261	
	Contusion	Fall / trauma AND Musculoskeletal pain / swelling AND Single joint pain OR extremity pain AND Suspicion of fracture / dislocation AND Xray confirmed no abnormality	Major trauma	No	PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	If Contusion with severe deformity, unable to weightbear, or loss of motricity/feeling: Refer for specialized outpatient consultation: Orthopedics If NO Contusion with severe deformity, unable to weightbear, or loss of motricity/feeling: No inpatient referral needed: Reasons to return to clinic	New	Added: Not in IMCI or Tanzanian guidelines	NEW		Sensitivity and specificity of X-ray for diagnosis of fractures in children is high (93.2 and 99.5%) and can therefore reliably exclude fractures (Moritz et al., 2008)
	Major head injury	Head trauma AND Danger sign OR Open skull fracture OR (History of loss of consciousness OR severe headache OR major trauma OR vomiting) AND Altered mental status OR signs basilar skull fracture		Yes - urgent			Refer urgently for inpatient management	New	Added different categorization of head injuries adapted from PECARN rule	Adapted	STGC p. 230	No traumatic brain injury clinical practice guidelines identified in a systematic review that was developed in Sub-Saharan Africa, only one was not from a high-income country (Brazil) (Appeleng et al. PLoS One. 2018) PECARN clinical prediction rule criteria adapted for LMIC (Schorfeld et al. 2014; Easter et al. 2014; Kuppermann et al. 2009)
	Moderate Head Injury	Head trauma AND NO open skull fracture AND History of loss of consciousness OR severe headache OR major trauma OR vomiting AND NO Danger sign AND NO altered mental status AND NO signs basilar skull fracture	Major head injury; major trauma	If worsening in clinic in 4 hrs	PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2 days [10-20mg/kg/dose four times a day x 2d]	Conditional	4 hour surveillance for head injury Head injury guidance	New	Added different categorization of head injuries adapted from PECARN rule	Adapted	STGC p. 230	As above
	Minor Head Injury	Head trauma AND NO open skull fracture AND NO History of loss of consciousness AND NO severe headache AND NO major trauma AND NO vomiting AND NO Danger sign AND NO altered mental status AND NO signs basilar skull fracture	Major and moderate head injury; major trauma	No	PO Paracetamol 40-80 mg/Kg/day divided into 4 doses for 2 days [10-20mg/kg/dose four times a day x 2d]	Conditional	Head injury guidance	New	Added different categorization of head injuries adapted from PECARN rule	Adapted	STGC p. 230	As above

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	Major Burn	Burn AND Circumferential burn OR ≥5% TBSA OR location over major joint OR feet OR genital area OR hands (not palms) OR face		Yes - urgent	Topical Mupirocin 2% twice a day for 7-14 days (if Mupirocin not available) Topical Silver Sulfadiazine 1% to affected area twice a day for 7-14 days Tetanus vaccine if incomplete If skin warm or swollen or with pus: PO Co-Amoxicillin/Cloxacillin acid 80-100mg/kg/day divided into 2 doses for 5-7 days [40-50mg/kg/dose two times a day x 5-7d]		Major burn care Refer urgently for inpatient management	New	Adapted work-up and management for primary care health facilities	Adapted	STGC p. 228	Management of burns (Karbelowsky et al. 2007; Outwater et al. 2020; Stander et al. 2011; Sheridan, 2018; Young et al. 2017)
	Minor Burn	Burn NO Major burn criteria		No	Topical Mupirocin 2% twice a day for 7-14 days (if Mupirocin not available) Topical Silver Sulfadiazine 1% to affected area twice a day for 7-14 days Tetanus vaccine if incomplete If skin warm or swollen or with pus: PO Co-Amoxicillin/Cloxacillin acid 80-100mg/kg/day divided into 2 doses for 5-7 days [40-50mg/kg/dose two times a day x 5-7d] Return every 24 - 48 hrs to clean and dress wound Consider child abuse if burn from object (refer to social worker)	Conditional	Burn care Return every 24-48 hours to clean and dress wound Consider child abuse if burn from object (Refer to social worker)	New	Adapted work-up and management for primary care health facilities	Adapted	STGC p. 228	Management of burns (Karbelowsky et al. 2007; Outwater et al. 2020; Stander et al. 2011; Sheridan, 2018; Young et al. 2017)
	Inhalation injury	Significant exposure to fire or smoke AND Cough OR Difficulty breathing AND Fast breathing OR chest indrawing OR Respiratory distress		Yes - urgent	If Difficulty breathing or Cough AND wheezing: INH Salbutamol 200mcg four times a day for 1 days (if Salbutamol not available) INH Budesonide 200mcg two times a day-four times a day for 1 days Oxygen therapy (if available)		Refer urgently for inpatient management	New	Oxygen therapy if fast breathing or chest indrawing, and not only in those with respiratory distress	Adapted	STGC p. 314	
	Carbon monoxide poisoning	Significant exposure to fire or smoke AND Danger sign OR ≥24months (Dizziness OR altered mental status OR headache) OR <24 months: severe irritability		Yes - urgent	Oxygen therapy (if available)		Refer urgently for inpatient management	New	No arterial blood gas and serum electrolyte measurement since not usually available at primary care	Adapted	STGC p. 317	Diagnosis and management (Hampson et al. 2012)
	Suspicion of poisoning	Accidental ingestion potentially harmful entity AND ≥24 months: (Headache OR dizziness OR danger sign OR altered mental status) OR < 24 months OR Danger sign OR single convulsion		Yes - urgent			Refer urgently for inpatient management	New	Identification of those needing referral, and those that can be observed	Adapted	STGC p. 232	Diagnosis and management of poisoning in children (Vetez et al. 2020)
	Uncomplicated Suspicion of poisoning	Accidental ingestion potentially harmful entity AND NO Headache AND NO dizziness AND NO danger sign AND NO altered mental status AND NOT < 24 months		No		Conditional	Uncomplicated poisoning guidance	New	Identification of those needing referral, and those that can be observed	Adapted	STGC p. 232	Diagnosis and management of poisoning in children (Vetez et al. 2020)
	Major trauma	Major trauma (car accident, major fall, suspicion of multiple fractures, major bleeding)		Yes - urgent			Control bleeding Stabilize neck Refer urgently for inpatient management	New	Added. Not in IMCI or Tanzanian guidelines	NEW		The most common mechanisms of severe trauma in children are road traffic accidents and falls, with a mortality of about 1% in low-middle income countries (Bradshaw et al., 2018)
Headache and stiff neck	Non-severe headache	Age ≥3y AND Headache AND NO Head trauma and NO Danger signs	Suspicion of poisoning, major trauma, Major/moderate minor head injury, Carbon monoxide poisoning, Inhalation injury, suspicion of poisoning, Osteomyelitis/Septic arthritis, amphyloxia, complicated chicken pox, severe, complicated measles, non specific viral rash, Severe eye disease, orbital cellulitis, mastoiditis, complicated acute ear infection, pelvic inflammatory disease, pyelonephritis, severe dehydration, moderate	No	PO Paracetamol 40-80 mg/kg/day divided into 4 doses for 2-5 days [10-20mg/kg/dose four times a day x 2-5d]	Conditional	No inpatient referral needed. Reasons to return to clinic Headache guidance	New	In line with Tension headaches in IMAI	Yes	MAI 2009	
	Suspected meningitis	Fever AND NO Danger sign AND Age ≥5y AND Difficulty moving head AND Stiff neck		Yes - urgent	Pre-referral: IM/IV Ceftriaxone HD 80-100mg/kg/day divided into 1 dose for 1 days (80-100mg/kg/dose daily x 1 dose) (if Cef not available) IM/IV Ampicillin HD 400mg/kg/day divided in 4 doses for 1 days (100mg/kg/dose four times a day x 1 dose) & (if Cef not available) IM/IV gentamicin 7mg/kg/day divided into 1 dose for 1 days (7mg/kg/dose daily x 1 dose) PO Paracetamol 40-80 mg/kg/day divided into 4 doses x 1 days [10-20mg/kg/dose four times a day x 1d] Prevent low blood sugar		Keep child warm	Adapted	Stiff neck: Only checked if no danger sign present, and not checked in children <12 months as uncommon even in presence of meningitis (note all children with any CNS danger sign are covered for meningitis under diagnosis 'very severe disease' or 'CNS Danger sign'. 'Difficulty moving head' added as a question prior to examination for 'stiff neck' to improve specificity of this sign and reduce the amount of children who need to be examined for stiff neck (as fever without danger signs is common, and difficulty moving head can be easily observed) Other criteria in STCs for suspected meningitis not all included (also not in IMCI) as either poor sensitivity, specificity or poorly assessed at primary care level (bulging fontanelle, weak cry, irritability)	Adapted	IMCI 2014, IMCI TZ 2020	IMCI 2014, IMCI TZ 2020
Prevention / Screening	Possible HIV	Age ≥9 months - 12 years AND Mother HIV+ or negative/unknown/negative AND HIV status of child is unknown/negative AND indication to perform test AND HIV rapid test positive OR Age ≥12 years AND HIV status unknown/negative AND indication to perform test AND HIV rapid test positive		Yes - to relevant clinic			Possible HIV guidance	Adapted	In line with Tanzanian National Guidelines for the management of HIV and AIDS 2015 and 2017	YES	Tanzanian National Guidelines for the management of HIV and AIDS 2015 and 2017	

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	HIV exposed	Age 2m-9m AND Mother HIV+ AND NO PCR Confirmed HIV in infant OR Age 9 - 18m AND Mother HIV+ or mother HIV unknown AND HIV Ab test +ve		Yes - for HIV PCR test			If mother HIV positive: HIV rapid test If HIV RDT negative or unavailable: HIV exposure counselling & testing Refer for HIV PCR test		In line with Tanzanian National Guidelines for the management of HIV and AIDS 2015 and 2017		Tanzanian National Guidelines for the management of HIV and AIDS 2015 and 2017	
	HIV Positive Mother	Age or patient <12y AND HIV status of mother unknown AND Indication and consent to test mother for HIV AND HIV rapid test for mother positive OR HIV status of mother positive					Counseling to HIV Positive Mother		In line with Tanzanian National Guidelines for the management of HIV and AIDS 2015 and 2017		Tanzanian National Guidelines for the management of HIV and AIDS 2015 and 2017	
	HIV screening unavailable	HIV rapid test unavailable					HIV screening counselling	Adapted	In line with Tanzanian National Guidelines for the management of HIV and AIDS 2015 and 2017	YES	Tanzanian National Guidelines for the management of HIV and AIDS 2015 and 2017	
	Negative HIV test	HIV rapid test negative					Negative HIV test - Post test counselling if child is being breastfed.	Adapted	In line with Tanzanian National Guidelines for the management of HIV and AIDS 2015 and 2017	YES	Tanzanian National Guidelines for the management of HIV and AIDS 2015 and 2017	
General / Universal Assessment	Prevention and Screening	All children without a severe diagnosis: 1. Ask if vaccinations are complete for age 2. Received vit A in last 6 months (if 6-59m) 3. Ask if received deworming in the last 6 months (1-15y)	All severe diagnoses requiring a referral		If no deworming in last 6 months: PO Mebendazole (prevention) (Age >=1yr) 500mg daily for 1 day (if Mebendazole not available) PO Albendazole (prevention) (age >=2yr) 400mg daily for 1 day If no Vitamin A in last 6 months: PO Vitamin A (prevention) 1 dose - (Fixed dose: Age 6-12mth = 100,000IU / <=>12mth = 200,000IU)		If Vaccinations not complete: Refer to RCH clinic to complete vaccination If <6mth: Advise to repeat vitamin A supplementation every 6 months If >12mth: Advise to repeat deworming every 6 months	Same	In line with STGC, and IMCI	YES	STGC p. 22	
	Known HIV	Known positive HIV status					Considerations when treating an HIV+ patient	New	n/a			
	Known sickle cell disease	Known sickle cell disease				question of chronic conditions added	Considerations in managing a patient with sickle cell disease	New	Considerations for patients with sickle cell disease in regards to antibiotic treatment and inpatient admission in line with the Sickle cell disease clinical management guidelines (Tanzania 2020)		Tanzanian Sickle cell disease clinical management guidelines (2020)	
	Known Cerebral palsy	Known cerebral palsy				question of chronic conditions added	Considerations in treating a patient with cerebral palsy	New	n/a			
	Known Congenital heart disease	Known congenital heart disease				question of chronic conditions added	Considerations when treating a patient with congenital heart disease	New	n/a			
	Follow-up consultation	Consulted a health facility for an acute illness in the past 14 days AND coming for a follow-up consultation		Consider referral if the patient is considerably worse than the previous consultation			If child's condition is worse than last consultation: Consider Referral Continue treatment and medication prescription as previously prescribed	New	n/a			