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FOR ATTENTION: FACILITY MANAGERS, PHARMACISTS, PHARMACY ASSISTANTS, MEDICAL OFFICERS, CLINICAL NURSE PRACTITIONERS, NIMART NURSES

CIRCULAR H 149./2021

REVISED 2021 DRUG SENSITIVE TUBERCULOSIS DRUG DOSING CHART FOR CHILDREN < 8 YEARS AND/OR < 25 KG

Background

The purpose of this circular is to inform service providers of the revised TB dosing chart for children under the age of 8 and < 25kg. This circular will replace circular H02/2020.

The National anti-Tuberculosis medicines contract includes two new dispersible paediatric TB fixed dose combination formulations:

Ingredients	Tradename	ICN	Cost
Rifampicin & Isoniazid 7.5/50mg tablet (84's)	Afaris Paed 75/50	3769283	R78.10
Rifampicin, Pyrazinamide & Isoniazid 75/150/50mg tablet (84's)	Co-Afaris Paed 75/50/150	3768805	R95.30

The National Essential Medicines List Committee have approved the following updated weight-band dosing tables for the management of paediatric TB and they are available in PHC and Paediatric Hospital level STG:

- Uncomplicated pulmonary tuberculosis
- Complicated pulmonary tuberculosis
- Disseminated (Miliary) TB
- Tuberculous meningitis (TBM)

Implementation

The new formulations have been included in the WC Provincial Code List and can be ordered from the CMD with immediate effect.



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Chief Director: ECSS

Date: 09/09/21

TB Drug Dosing Chart for Children < 8 years and/or < 25 kg With Drug-Susceptible/Presumed Drug-Susceptible Uncomplicated TB and Complicated TB (2021)

(excluding TB meningitis / central nervous system TB / miliary TB – refer to chart on next page)

	Uncomplicated TB disease		Complicated TB disease (excluding TB meningitis – refer to chart on next page)			
	Intensive phase 2 months Once daily 7 days a week	Continuation phase 4 months Once daily 7 days a week	Intensive phase 2 months Once daily 7 days a week		Continuation phase 4 months* Once daily 7 days a week	
Target dose or dose range (mg/kg/dose)	HRZ H: 10 (7-15) R: 15 (10-20) Z: 35 (30-40)	HR H: 10 (7-15) R: 15 (10-20)	HRZ H: 10 (7-15) R: 15 (10-20) Z: 35 (30-40)	E 20 (15-25)	HR H: 10 (7-15) R: 15 (10-20)	Target dose or dose range (mg/kg/dose)
Formulation	HRZ 50/75/150 mg dispersible tablet (scored)	HR 50/75 mg dispersible tablet (scored)	HRZ 50/75/150 mg dispersible tablet (scored)	E 400 mg tablet (not scored) OR 400 mg/8 ml # suspension	HR 50/75 mg dispersible tablet (scored)	Formulation
Body weight (kg)						Body weight (kg)
<2	Obtain expert advice					<2
2 - 2.9	½ tab or 2 ml ^δ	½ tab or 2 ml ^δ	½ tab or 2 ml ^δ	1 ml #	½ tab or 2 ml ^δ	2 - 2.9
3 - 3.9	¾ tab or 3 ml ^δ	¾ tab or 3 ml ^δ	¾ tab or 3 ml ^δ	1.5 ml #	¾ tab or 3 ml ^δ	3 - 3.9
4 – 7.9	1 tab or 4ml	1 tab or 4 ml	1 tab or 4 ml	2.5 ml #	1 tab or 4 ml	4 – 7.9
8 - 11.9	2 tabs or 8 ml	2 tabs or 8 ml	2 tabs or 8 ml	½ tab or 4 ml #	2 tabs or 8 ml	8 - 11.9
12 - 15.9	3 tabs or 12 ml	3 tabs or 12 ml	3 tabs or 12 ml	¾ tab or 6 ml #	3 tabs or 12 ml	12 - 15.9
16 - 24.9	4 tabs or 16 ml	4 tabs or 16 ml	4 tabs or 16 ml	1 tab or 8 ml #	4 tabs or 16 ml	16 - 24.9

Uncomplicated TB disease in children = peripheral lymphadenitis; uncomplicated intrathoracic TB (hilar or mediastinal lymphadenopathy, minimal bronchopneumonia, simple pleural effusion)

Complicated TB disease in children (excluding central nervous system TB or miliary TB) = complicated/severe intrathoracic TB (extensive bronchopneumonia, cavitary disease, smear-positive disease, TB empyema);severe forms of extrapulmonary TB (including TB pericarditis, TB abdomen, osteoarticular)

H =Isoniazid, R =Rifampicin, Z =Pyrazinamide, E =Ethambutol

Children should be taught and encouraged to swallow whole tablets or, if required, fractions of tablets so as to avoid large volumes of liquid medication

^δ If oral suspension required, for each dose, disperse 1 x HRZ or 1 x HR 50/75 mg tablet in 4 ml of water, administer required dose, discard unused suspension

If oral suspension required, for each dose, crush 1 x Ethambutol 400 mg tablet to a fine powder, disperse in 8 ml of water to prepare a concentration of 400 mg/8 ml (50 mg/ml), administer required dose as indicated in above chart, discard unused suspension

* Guided by expert opinion, the continuation phase may be prolonged to 7 months or more in slow responders and children with HIV

TB Drug Dosing Chart for Children < 8 years and/or < 25 kg
With Drug-Susceptible/Presumed Drug-Susceptible TB Meningitis / Central Nervous System
TB / Miliary TB)

Body weight (kg)	Single phase of treatment 6-9 months Once daily 7 days a week			Body weight (kg)
	HR ^a 60/60 mg dispersible tablet (scored)	Z ^c 500 mg tablet (scored) or 500 mg/8 ml suspension	Eto [#] 250 mg tablet (scored) or 250 mg/8 ml suspension	
<2	Obtain expert advice			
2 – 2.9	¾ tab or 3 ml	1 ml	1.5 ml	2 – 2.9
3 – 3.9	1 tab or 4 ml	2 ml	2 ml	3 – 3.9
4 – 4.9	1 ½ tabs or 6 ml	2.5 ml	2.5 ml	4 – 4.9
5 – 5.9	1 ¾ tabs or 7 ml	3 ml	3 ml	5 – 5.9
6 – 6.9	2 tabs or 8 ml	½ tab or 4 ml	½ tab or 4 ml	6 – 6.9
7 – 8.9	2 ½ tabs or 10 ml			7 – 8.9
9 – 9.9	3 tabs or 12 ml	¾ tab or 6 ml	¾ tab or 6 ml	9 – 9.9
10 – 11.9	3 ½ tabs or 14 ml			10 – 11.9
12 – 12.9	4 tabs or 16 ml	1 tab or 8 ml	1 tab or 8 ml	12 – 12.9
13 – 14.9	4 ½ tabs or 18 ml			13 – 14.9
15 – 16.9	5 tabs or 20 ml			15 – 16.9
17 – 17.9	5 ½ tabs or 22 ml	1 ¼ tabs or 10 ml	1 ¼ tabs or 10 ml	17 – 17.9
18 – 19.9				1 ½ tabs or 12 ml
20 – 24.9	6 tabs or 24 ml	1 ½ tabs or 12 ml	1 ½ tabs or 12 ml	20 – 24.9

H =Isoniazid, R =Rifampicin, Z =Pyrazinamide, E =Ethambutol

Children should be taught and encouraged to swallow whole tablets or, if required, fractions of tablets so as to avoid large volumes of liquid medication if possible

- ^a If oral suspension required, for each dose, disperse 1 x HR 60/60 mg tablet in 4 ml of water, administer required dose as indicated in above chart, discard unused suspension
- ^e If oral suspension is required, crush 1 x 500 mg Pyrazinamide tablet to a fine powder, disperse in 8 ml water to prepare a concentration of 500 mg/8 ml (62.5 mg/ml), administer required dose as indicated in above chart, discard unused suspension
- [#] If oral suspension is required, crush 1 x 250 mg Ethionamide tablet to a fine powder, disperse in 8 ml of water to prepare a concentration of 250 mg/8 ml (31.3 mg/ml), administer required dose as indicated in above chart, discard unused suspension

TB Drug Dosing Chart for Children ≥ 8 years and/or ≥ 25 kg, adolescents & adults with Drug-Susceptible/Presumed Drug-Susceptible TB
All forms of TB disease

Body weight (kg)	Intensive phase 2 months Once daily 7 days a week	Continuation phase 4 months Once daily 7 days a week		Body weight (kg)
	HRZE tablets 75/150/400/275 mg	HR tablets 75/150 mg	HR tablets 150/300 mg	
25 - 37	2 tabs	2 tabs		25 - 37
38 - 54	3 tabs	3 tabs		38 - 54
55 - 70	4 tabs			55 - 70
≥71	5 tabs		2 tabs	≥71

*Guided by expert opinion, the continuation phase may be prolonged to 7 months or more in some severe forms of TB including central nervous system TB, miliary TB and osteoarticular TB

Adapted from World Health Organisation Guidance for national tuberculosis programmes on the management of tuberculosis in children, second edition (2014)