

# MDR-TB Weight-Based Dosing Chart for Children

|                        |  | Group 1: Oral first-line anti-TB drugs                       |                            |               |   | Group 2:                   | Group 3: Fluoroquinolones |                             |                     |                           | Group 4: Oral bacteriostatis agents   |                          |                     |             | Group 5:                               |   | Target Dose                       |                        |         |         |         |         |
|------------------------|--|--|----------------------------|---------------|---|----------------------------|---------------------------|-----------------------------|---------------------|---------------------------|---------------------------------------|--------------------------|---------------------|-------------|--|---|-----------------------------------|------------------------|---------|---------|---------|---------|
| Target Dose            | Ethambutol (15-25 mg/kg)   |  | Pyrazinamide (30-40 mg/kg) |               | Injectable anti-TB drugs (injectable agents or parenteral agents)   | Levofloxacin (15-20 mg/kg) |                           | Moxifloxacin (7.5-10 mg/kg) |                     | Olofloxacin (15-20 mg/kg) | Cycloserine/ Terizidone (15-20 mg/kg) |                          | PAS (150-200 mg/kg) |             | Protonamide/ Ethionamide (15-20 mg/kg) | Anti-TB drugs with unclear efficacy or unclear role in MDR-TB treatment   | Isoniazid High Dose (15-20 mg/kg) | Available Formulations |         |         |         |         |
| Available Formulations | 100 mg tablet  | Suspend 400mg tab in 8 mL of water for a 50 mg/mL suspension | 400 mg tablet              | 500 mg tablet |   | 250 mg tablet              | 25 mg/mL suspension       | 400 mg tablet               | 20 mg/mL suspension | 200 mg tablet             | 250 mg capsule                        | 1 capsule in 10 mL water | Daily               | Twice Daily | 250 mg tablet                          |   | 100 mg tablet                     |                        |         |         |         |         |
| Wt (kg)                | Consult with a clinician experienced in pediatric MDR-TB prescribing for neonates (<28 days of age) and infants weighing <3 kg |  |                            |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   | Wt (kg)                |         |         |         |         |
| <3                     |  |  |                            |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   | <3                     |         |         |         |         |
| 3-3.9                  | 1 tab  | 2 mL   | .25 tab                    | .25 tab       | To illustrate dose calculation, take the example of a child that weighs 6.9 kg. Both the low and high doses for the child's weight are calculated.<br><br>For kanamycin: Low dose: 15 mg/kg x 6.9 kg = 103 mg High dose: 20 mg/kg x 6.9 kg = 138 mg A convenient dosing is then chosen between the two numbers.<br><br>Select a dose between the two numbers and towards the higher number. In this case, choose: 125 mg per day, single dose.<br><br>Calculate the number of mL to draw up in the syringe based on the mg/mL concentration of the preparation. | .25 tab                    | 2.5 mL                    | not recommended             | 1.5 mL              | .5 tab                    | .25 cap                               | 2.5 mL                   | 500 mg              | 250 mg      | .25 tab                                | Group 5 drugs are not recommended by the WHO for routine use in MDR-TB treatment because their contribution to the efficacy of MDR regimens is unclear. Their role in pediatric MDR-TB treatment is even less clear. Most of these drugs are expensive, and some require intravenous administration, and/or have severe side effects. However, they can be used in cases where adequate regimens are impossible to design with the medications from Groups 1-4. They should be used in consultation with an expert in the treatment of DR-TB. | .5 tab                            | 3-3.9                  |         |         |         |         |
| 4-4.9                  |  |  | 2 mL                       |               |   |                            |                           |                             | 2 mL                |                           |                                       |                          |                     |             |  |   | 1000 mg                           | 500 mg                 |         |         | 4-4.9   |         |
| 5-5.9                  |  |  |                            |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        |         |         |         | 5-5.9   |
| 6-6.9                  |  |  |                            |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        |         |         |         |         |
| 7-7.9                  |  |  | .5 tab                     |               |   |                            | .5 tab                    | 5.0 mL                      |                     | 2.5 mL                    |                                       | .5 cap                   | 5 mL                | 1500 mg     | 750 mg                                 |   |                                   |                        | 1 tab   | 7-7.9   |         |         |
| 8-8.9                  | 2 tabs   | 4 mL   |                            |               |   |                            |                           |                             | 5 mL                | 1 tab                     | .75 cap                               | 7.5 mL                   | 2000 mg             | 1000 mg     | .75 tab                                |   |                                   |                        | 2 tabs  | 8-8.9   |         |         |
| 9-9.9                  |  |  |                            |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        |         |         |         |         |
| 10-10.9                |  |  |                            |               |   |                            | .75 tab                   | 7.5 mL                      |                     |                           |                                       |                          |                     |             |  |   |                                   |                        |         | 10-10.9 |         |         |
| 11-11.9                | 3 tabs   | 6 mL   | 1 tab                      | 1 tab         |   |                            | 1 tab                     | 10 mL                       |                     |                           | 1 cap                                 | 10 mL                    | 2500 mg             | 1250 mg     | 1 tab                                  |   |                                   |                        |         | 11-11.9 |         |         |
| 12-12.9                |  |  |                            |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        |         |         |         | 12-12.9 |
| 13-13.9                |  |  |                            |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        |         |         | 13-13.9 |         |
| 14-14.9                |  |  |                            |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        |         |         | 14-14.9 |         |
| 15-15.9                | 4 tabs   | 8 mL   |                            |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        | 15-15.9 |         |         |         |
| 16-16.9                |  |  |                            |               | 1.5 tabs  |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        | 16-16.9 |         |         |         |
| 17-17.9                |  |  |                            |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        |         | 17-17.9 |         |         |
| 18-18.9                |  |  |                            |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        |         | 18-18.9 |         |         |
| 19-19.9                |  |  |                            |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        | 19-19.9 |         |         |         |
| 20-20.9                |  |  |                            |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        | 20-20.9 |         |         |         |
| 21-21.9                |  |  |                            |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        | 21-21.9 |         |         |         |
| 22-22.9                |  |  |                            |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        | 22-22.9 |         |         |         |
| 23-23.9                |  |  | 2 tabs                     |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        | 23-23.9 |         |         |         |
| 24-24.9                |  |  |                            |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        | 24-24.9 |         |         |         |
| 25-25.9                |  |  |                            |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        | 25-25.9 |         |         |         |
| 26-26.9                |  |  |                            |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        | 26-26.9 |         |         |         |
| 27-27.9                |  |  |                            |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        | 27-27.9 |         |         |         |
| 28-28.9                | 5 tabs   | 10 mL  | 2 tabs                     | 2 tabs        |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        | 28-28.9 |         |         |         |
| 29-29.9                |  |  |                            |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        |         |         | 29-29.9 |         |
|                        | For preventive regimens, consult with experts regarding optimal regimen construction.  |  |                            |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        |         |         |         |         |
|                        | The doses of isoniazid, ethambutol, and fluoroquinolones for preventive regimens are the same as in this dosing chart.         |  |                            |               |   |                            |                           |                             |                     |                           |                                       |                          |                     |             |  |   |                                   |                        |         |         |         |         |



| Group 2            | Streptomycin           | Amikacin               | Kanamycin              | Capreomycin            |
|--------------------|------------------------|------------------------|------------------------|------------------------|
| Daily Dose         | 20-40 mg/kg once daily | 15-20 mg/kg once daily | 15-20 mg/kg once daily | 15-20 mg/kg once daily |
| Maximum Daily Dose | 1000 mg                | 1000 mg                | 1000 mg                | 1000 mg                |

| Group 5            | Clofazimine (CFZ)   | Amoxicillin-clavulanate (AMX-CLV)                                | Meropenem (MPN)              | Linezolid (LZD)   | Clarithromycin (CLR)  |
|--------------------|---|--|------------------------------|---|-----------------------|
| Daily Dose         | 2-3 mg/kg once daily; if the child is <25kg give 100mg every second day | 80 mg/kg in two divided doses based on the amoxicillin component | 20-40 mg/kg IV every 8 hours | 10 mg/kg dose twice daily for children <10 years of age 300 mg daily for children >10 years of age (also give vitamin B6) | 7.5 mg/kg twice daily |
| Maximum Daily Dose | 200 mg  | 4000 mg amoxicillin and 500 mg clavulanate                       | 6000 mg                      | 600 mg  | 1000 mg               |