### ANTIRETROVIRAL DRUG DOSING CHART FOR CHILDREN 2013

Compiled by the Child and Adolescent Committee of the SA HIV Clinicians Society in collaboration with the Department of Health

<table>
<thead>
<tr>
<th>Weight (kg)</th>
<th>Available Formulations</th>
<th>Available Formulations</th>
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<tbody>
<tr>
<td>&lt;3</td>
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<tr>
<td>3.3-3.9</td>
<td>2ml bd 2ml bd</td>
<td>2ml bd 2ml bd</td>
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<td>4.4-4.9</td>
<td>3ml bd 3ml bd</td>
<td>3ml bd 3ml bd</td>
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<td>5.5-5.9</td>
<td>4ml bd 4ml bd</td>
<td>4ml bd 4ml bd</td>
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<td>6.6-6.9</td>
<td>6ml bd 6ml bd</td>
<td>6ml bd 6ml bd</td>
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<tr>
<td>5-9.9</td>
<td>8ml bd 8ml bd</td>
<td>8ml bd 8ml bd</td>
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<tr>
<td>9-13.9</td>
<td>10ml bd 10ml bd</td>
<td>10ml bd 10ml bd</td>
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<tr>
<td>10.1-10.9</td>
<td>12ml od 12ml od</td>
<td>12ml od 12ml od</td>
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<td>11.1-13.9</td>
<td>14ml od 14ml od</td>
<td>14ml od 14ml od</td>
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<tr>
<td>14.1-16.9</td>
<td>16ml od 16ml od</td>
<td>16ml od 16ml od</td>
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<tr>
<td>17.1-19.9</td>
<td>18ml od 18ml od</td>
<td>18ml od 18ml od</td>
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<tr>
<td>20.2-23.4</td>
<td>20ml bd 20ml bd</td>
<td>20ml bd 20ml bd</td>
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<td>25.2-28.5</td>
<td>22ml bd 22ml bd</td>
<td>22ml bd 22ml bd</td>
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<td>≥28.5</td>
<td>24ml bd 24ml bd</td>
<td>24ml bd 24ml bd</td>
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### Dosing Recommendations

- **Abacavir (ABC)**
  - ≥10kg: 4ml/kg TWICE daily
  - <10kg: 8mg/kg TWICE daily

- **Lamivudine (3TC)**
  - ≥10kg: 4mg/kg TWICE daily
  - <10kg: 8mg/kg TWICE daily

- **Efavirenz (EFV)**
  - By weight band: 200mg/day

- **Lopinavir/Ritonavir (LPV/rtv)**
  - When on Rifampicin: 60mg

- **Ritonavir boosting (RTV)**
  - TWICE daily

- **Stavudine (d4T)**
  - 1mg/kg/dose TWICE daily

- **Didanosine (ddI)**
  - 160-200mg/m2/dose TWICE daily

- **Nevirapine (NVP)**
  - 180-240mg/m2/dose TWICE daily

- **Zidovudine (AZT)**
  - 180-240mg/m2/dose TWICE daily

### Available Formulations

- **Caps**: 50, 100mg, 150mg, 300mg
- **Tabs**: 50, 200, 300mg

### Weight Band Dosing

- **3-3.9 kg**: 2ml bd, 2ml bd
- **4-4.9 kg**: 3ml bd, 3ml bd
- **5-5.9 kg**: 4ml bd, 4ml bd
- **6-6.9 kg**: 5ml bd, 5ml bd
- **7-7.9 kg**: 6ml bd, 6ml bd
- **8-8.9 kg**: 8ml bd, 8ml bd
- **9-9.9 kg**: 10ml bd, 10ml bd
- **10-10.9 kg**: 12ml od, 12ml od
- **11-13.9 kg**: 14ml od, 14ml od
- **14-16.9 kg**: 16ml od, 16ml od
- **17-19.9 kg**: 18ml od, 18ml od
- **20-22.9 kg**: 20ml bd, 20ml bd
- **23-24.9 kg**: 22ml bd, 22ml bd
- **25-28.9 kg**: 24ml bd, 24ml bd
- **30-34.9 kg**: 26ml bd, 26ml bd
- **35-39.9 kg**: 28ml bd, 28ml bd
- **≥40 kg**: 30ml bd, 30ml bd

### Key Points

- **Avoid using** LPV/rtv solution in any full term infant <14 days of age and any premature infant <14 days after their due date of delivery (40 weeks post conception) or obtain expert advice.
- **Children 25-34.9kg may be dosed with LPV/rtv 200/50mg adult tabs; 2 tabs am; 1 tab pm**

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**Cotrimoxazole Dose**

- 2.5ml od, 5ml od, 10ml or 1 tab od

**Multivitamin Dose**

- 2.5ml od, 2.5ml od, 5ml od, 10ml or 1 tab od
PRACTICAL ADVICE ON ADMINISTRATION OF ARV DRUGS

**Abacavir (ABC)**
Caregivers must be warned about potential severe progressive hypersensitivity reaction which may include fever, rash, gastrointestinal & respiratory symptoms. If hypersensitivity occurs it is usually during first six weeks of therapy, symptoms tend to worsen in the hours immediately after the dose and worsen with each subsequent dose.

Caregivers or patients should discuss symptoms early with the clinician rather than terminating therapy without consultation. ABC should be stopped permanently if hypersensitivity reaction occurs. Avoid combining ABC and NVP in a regimen and avoid concurrent initiation of ABC and co-trimoxazole. Tablets (except 60mg) must not be chewed, divided or crushed; swallow whole with or without food.

**Lamivudine (3TC)**
Well tolerated, no food restrictions, oral solution may be stored at room temperature. Tablets are scored and can be easily divided; may be crushed and mixed with a small amount of water or food and immediately ingested.

**Stavudine (d4T)**
Well tolerated & palatable but oral solution requires refrigeration after reconstitution. Discard after 30 days. Capsules may be opened and powder contents dispersed in water or mixed with a small amount of food (e.g. yoghurt) and immediately ingested. Currently available tablets are not scored. Use with caution in children with anaemia due to potential for bone marrow suppression.

**Lopinavir/ritonavir (Kaletra® solution; Aluvia® tablets)**
Dose is calculated on lopinavir component. Solution should be taken with food as increases absorption. Solution should be refrigerated however can be stored at room temperature up to 25°C for 6 weeks. May need techniques to increase tolerance & palatability: coat mouth with peanut butter, dull taste buds with ice, follow dose with sweet foods. Tablets must not be chewed, divided or crushed; swallow whole with or without food. Many drug interactions due to RTV inhibition of cytochrome p450.

**Didanosine (ddl)**
At least 2 tablets of appropriate strength must be used at any one time for adequate buffering. Tablets may be chewed or crushed and dispersed in 30ml water and immediately ingested. Enteric coated (EC) capsules (250mg) are available for once daily use in children >25kg. It is recommended to administer ddl on an empty stomach at least 30 minutes before or 2 hours after meals.

**Efavirenz (EFV)**
EFV is not approved for children <3years/<10kg. Tablets must not be chewed, divided or crushed; swallow whole with or without food e.g. yoghurt or banana. Capsules may be opened and powder contents dispersed in water or mixed with a small amount of food (e.g. yoghurt) to disguise peppy taste and immediately ingested. Food, especially high-fat meals, increases absorption. Best given at bedtime to reduce CNS side-effects, especially during first 2 weeks. Consider drug-drug interactions.

**Ritonavir (RTV)**
Only recommended use at present is as booster for lopinavir/ritonavir when co-administered with rifampicin-containing TB treatment. Ritonavir boosting dose is not less than 0.75 x lopinavir/ritonavir dose. Should be taken with food. May be stored at room temperature, limited shelf life of 6 months. May need to use techniques described for Kaletra® to improve tolerance of bitter taste.

**Zidovudine (AZT)**
No food restrictions and oral solution may be stored at room temperature. Capsules may be opened and powder contents dispersed in water or mixed with a small amount of food (e.g. yoghurt) and immediately ingested. Currently available tablets are not scored. Use with caution in children with anaemia due to potential for bone marrow suppression.

**Nevirapine (NVP)**
Once-daily dosing during the first 2 weeks of treatment reduces frequency of rash. If a mild rash occurs during the induction period, continue once daily dosing and only escalate dose to twice daily once the rash has subsided and the dose is well tolerated.

NVP should be permanently discontinued and not restarted in children who develop severe rash especially if accompanied by fever, blistering or mucosal ulceration. No food restrictions. Tablets can be crushed and mixed with a small amount of water or food and immediately ingested. Avoid NVP if rifampicin is being co-administered. Consider drug-drug interactions.