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Ghana

The following provides a summary of specific guidelines from the country's national guidance strategy. Use the jump links in yellow to access details on first-, second-, and third-line treatment regimens by patient population, in accordance with the WHO guidelines. This summary can be downloaded or e-mailed to yourself or a colleague. The original country guidance document can also be found below the jump links for download.

Patient Population [Download summary page as PDF](#) [E-mail this page](#)

Suggest Updates

- [Adults and Adolescents \(Greater than or Equal to 13 Years\)](#)
 - [Children 5 - 13 Years](#)
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 - [Pregnant Women](#)
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-  [Guidelines for Antiretroviral Therapy in Ghana \(PDF / 1020 KB\)](#)
 -  [National Guidelines for Prevention of Mother to Child Transmission of HIV \(PDF / 1 MB\)](#)

Adults and Adolescents (Greater than or Equal to 13 Years)

Year Issued:

2010

HIV/TB Co-Infection Addressed:

Yes

Criteria for Treatment:

Antiretroviral therapy may be initiated when patients, including HIV positive pregnant women, satisfy the following the criteria:

1. Patients with CD4 count less than 350 cells /ml and / or
2. Symptomatic with HIV infection in WHO stage 3 and 4.

(Where initiation is based solely on WHO staging the CD4 count must be done as soon as possible).

Regimen Options:

First Line:

- First Option: Zidovudine + Lamivudine + Nevirapine
- Second Option: Zidovudine + Lamivudine + Efavirenz

Second

Line:

First Alternative:

If AZT base first line:

Tenofovir + (Emtricitabine or Lamivudine) + (Lopinavir/r or Atazanavir/r)

If LPV/r was used for HIV2 in first line, use ATV/r

Third Line:

None specified.

First Line:

Second Choice Drugs:

- First Option: Tenofovir + (Lamivudine or Emtricitabine) + Nevirapine
- Second Option: Tenofovir + (Lamivudine or Emtricitabine) + Efavirenz

Second

Line:

Second Alternative:

If TDF base first line:

Zidovudine + Lamivudine +(Lopinavir/r or Atazanavir/r)

Consider Abacavir if patient has used both Tenofovir and Zidovudine

Third Line:

None specified.

First Line:

SPECIAL CONDITIONS:

- HIV Co-infection with Hepatitis B: Lamivudine + Tenofovir + Efavirenz.
- Dual HIV-1 and HIV -2 or HIV-2 Infections: Due to the ineffectiveness of non-nucleoside drugs (Nevirapine and Efavirenz) in HIV-2 infection, combination of nucleosides and protease inhibitors should be used.

Second

Line:

None specified.

Third Line:

- ART Experienced Patients: Review previous drugs used for ART, duration of use, as well as the clinical, immunological and virological response to the therapy.

Conduct resistance testing if available.

Change all drugs if there is evidence of resistance

Consultation or referral to an HIV Expert

Reference:

Guidelines For Antiretroviral Therapy In Ghana (2010) The Republic of Ghana National Guidelines for Prevention of Mother to Child Transmission of HIV (2014)

Children 5 - 13 Years

Year Issued:

2010

HIV/TB Co-Infection Addressed:

Yes

Criteria for Treatment:

5-13 years:

- HIV antibody positive: All WHO Paediatric Stage 3 and IV irrespective of CD4 count; CD4 count less than 350 cells/mm³ irrespective of clinical stage

Regimen Options:

First Line:

Zidovudine* + Lamivudine + Nevirapine**

Alternative: Zidovudine* + Lamivudine + Efavirenz***

* Zidovudine is contraindicated in severe anaemia (Hb less than 8 mg/dl). Replace with Abacavir.

** Replace Nevirapine with Efavirenz (if child is more than 3 years and more than 10Kg)

Second

Line:

1a. Abacavir + Lamivudine + Lopinavir/r or

1b. Tenofovir + (Emtricitabine or Lamivudine) + Lopinavir/r (if child is more than 12 years)

(TDF+FTC Fixed-dose combination can be used)

Third Line:

In the case of failed second line, salvage therapy may be constructed. The goal in such situations is to attempt to reduce the viral load to undetectable levels and to improve the quality of life of the patient by balancing benefits and risks for the child. It is important to do mutational analysis (genotyping) to know the type of mutations involved to be able to construct a third-line regimen using novel regimen of different classes of ARVs (Integrase Inhibitors, Second generation NNRTIs and PIs) Where the failing regimen is not tolerable, treatment can be stopped and focus should be on prevention of OIs, relief of symptoms and management of pain needs. In all these cases refer to a specialist in ART.

First Line:

2. Second Choice Drugs: Abacavir + Lamivudine + Nevirapine

Alternative: Abacavir + Lamivudine + Efavirenz***

*** Efavirenz is contraindicated in Children less than 3 years or less than 10Kg and in Efavirenz related Persistent CNS toxicity. Replace with Nevirapine

Second Line:

2a. Zidovudine + Lamivudine + Lopinavir/r

2b. Tenofovir + (Emtricitabine or Lamivudine) + Lopinavir/r (if child is more than 12 years)

{TDF+FTC Fixed-dose combination can be used}

NOTE: Tenofovir is not recommended in pre-pubertal children (less than 12 years) due to safety and toxicity concerns over bone mineralization.

Third Line:

In the case of failed second line, salvage therapy may be constructed. The goal in such situations is to attempt to reduce the viral load to undetectable levels and to improve the quality of life of the patient by balancing benefits and risks for the child. It is important to do mutational analysis (genotyping) to know the type of mutations involved to be able to construct a third-line regimen using novel regimen of different classes of ARVs (Integrase Inhibitors, Second generation NNRTIs and PIs) Where the failing regimen is not tolerable, treatment can be stopped and focus should be on prevention of OIs, relief of symptoms and management of pain needs. In all these cases refer to a specialist in ART.

Reference:

Guidelines For Antiretroviral Therapy In Ghana (2010) The Republic of Ghana National Guidelines for Prevention of Mother to Child Transmission of HIV (2014)

Infants Greater than or Equal to 18 Months to 59 Months

Year Issued:

2010

HIV/TB Co-Infection Addressed:

Yes

Criteria for Treatment:

- HIV antibody positive: All WHO Paediatric Stage III and IV irrespective of CD4%.
- WHO Stage I and II with CD4% less than 25% (CD4 750 cells/mm³).
- All less than 24months should be treated.

Regimen Options:

First Line:

Zidovudine* + Lamivudine + Nevirapine**

Alternative: Zidovudine* + Lamivudine + Efavirenz***

* Zidovudine is contraindicated in severe anaemia (Hb less than 8 mg/dl). Replace with Abacavir.

** Replace Nevirapine with Efavirenz (if child is more than 3 years and more than 10Kg)

Second Line:

1a. Abacavir + Lamivudine + Lopinavir/r or

1b. Tenofovir + (Emtricitabine or Lamivudine) + Lopinavir/r (if child is more than 12 years)

(TDF+FTC Fixed-dose combination can be used)

Third Line:

In the case of failed second line, salvage therapy may be constructed. The goal in such situations is to attempt to reduce the viral load to undetectable levels and to improve the quality of life of the patient by balancing benefits and risks for the child. It is important to do mutational analysis (genotyping) to know the type of mutations involved to be able to construct a third-line regimen using novel regimen of different classes of ARVs (Integrase Inhibitors, Second generation NNRTIs and PIs) Where the failing regimen is not tolerable, treatment can be stopped and focus should be on prevention of OIs, relief of symptoms and management of pain needs. In all these cases refer to a specialist in ART.

First Line:

2. Second Choice Drugs: Abacavir + Lamivudine + Nevirapine

Alternative: Abacavir + Lamivudine + Efavirenz***

*** Efavirenz is contraindicated in Children less than 3 years or less than 10Kg and in Efavirenz related Persistent CNS toxicity. Replace with Nevirapine

NOTE:

Emtricitabine can be used in children over 3 months of age as an alternative to Lamivudine.

Tenofovir may be used in place of Zidovudine or Abacavir for children more than 12 years of age.

Second Line:

2a. Zidovudine + Lamivudine + Lopinavir/r

2b. Tenofovir + (Emtricitabine or Lamivudine) + Lopinavir/r (if child is more than 12 years)

{TDF+FTC Fixed-dose combination can be used}

NOTE: Tenofovir is not recommended in pre-pubertal children (less than 12 years) due to safety and toxicity concerns over bone mineralization.

Third Line:

In the case of failed second line, salvage therapy may be constructed. The goal in such situations is to attempt to reduce the viral load to undetectable levels and to improve the quality of life of the patient by balancing benefits and risks for the child. It is important to do mutational analysis (genotyping) to know the type of mutations involved to be able to construct a third-line regimen using novel regimen of different classes of ARVs (Integrase Inhibitors, Second generation NNRTIs and PIs) Where the failing regimen is not tolerable, treatment can be stopped and focus should be on prevention of OIs, relief of symptoms and management of pain needs. In all these cases refer to a specialist in ART.

Reference:

Guidelines For Antiretroviral Therapy In Ghana (2010) The Republic of Ghana National Guidelines for Prevention of Mother to Child Transmission of HIV (2014)

Infants less than 18 Months

Year Issued:

2010

HIV/TB Co-Infection Addressed:

Yes

Criteria for Treatment:

- DNA PCR not available HIV antibody sero-positive:

Treat if WHO Paediatric Presumptive Stage 4 disease irrespective of CD4 %. Where CD4% is available, start treatment when CD4% is less than 25% (CD4 750 cells/mm³). However, repeat HIV antibody test at 18 months or as soon as virologic test becomes available to confirm infection.

- Positive HIV DNA PCR and less than 24months: Treat all children irrespective of CD4% and WHO

clinical staging

Regimen Options:

First Line:

Zidovudine* + Lamivudine + Nevirapine**

Alternative: Zidovudine* + Lamivudine + Efavirenz***

* Zidovudine is contraindicated in severe anaemia (Hb less than 8 mg/dl). Replace with Abacavir.

** Replace Nevirapine with Efavirenz (if child is more than 3 years and more than 10Kg)

Second Line:

1a. Abacavir + Lamivudine + Lopinavir/r or

Third Line:

In the case of failed second line, salvage therapy may be constructed. The goal in such situations is to attempt to reduce the viral load to undetectable levels and to improve the quality of life of the patient by balancing benefits and risks for the child. It is important to do mutational analysis (genotyping) to know the type of mutations involved to be able to construct a third-line regimen using novel regimen of different classes of ARVs (Integrase Inhibitors, Second generation NNRTIs and PIs) Where the failing regimen is not tolerable, treatment can be stopped and focus should be on prevention of OIs, relief of symptoms and management of pain needs. In all these cases refer to a specialist in ART.

First Line:

2. Second Choice Drugs: Abacavir + Lamivudine + Nevirapine

Alternative: Abacavir + Lamivudine + Efavirenz***

*** Efavirenz is contraindicated in Children less than 3 years or less than 10Kg and in Efavirenz related Persistent CNS toxicity. Replace with Nevirapine

Second Line:

2a. Zidovudine + Lamivudine + Lopinavir/r

Third Line:

In the case of failed second line, salvage therapy may be constructed. The goal in such situations is to attempt to reduce the viral load to undetectable levels and to improve the quality of life of the patient by balancing benefits and risks for the child. It is important to do mutational analysis

(genotyping) to know the type of mutations involved to be able to construct a third-line regimen using novel regimen of different classes of ARVs (Integrase Inhibitors, Second generation NNRTIs and PIs) Where the failing regimen is not tolerable, treatment can be stopped and focus should be on prevention of OIs, relief of symptoms and management of pain needs. In all these cases refer to a specialist in ART.

Reference:

Guidelines For Antiretroviral Therapy In Ghana (2010) The Republic of Ghana National Guidelines for Prevention of Mother to Child Transmission of HIV (2014)

Pregnant Women

Year Issued:

2014

HIV/TB Co-Infection Addressed:

No

Criteria for Treatment:

All women identified as HIV Positive during pregnancy and breastfeeding will be initiated on ART and will continue treatment for life.

Regimen Options:

First Line:

TDF + 3TC (or FTC) + EFV

Second Line:

Alternative Regimen:

- a. AZT + 3TC + NVP ; or
- b. TDF + 3TC (or FTC) + NVP ; or
- c. AZT + 3TC + EFV

Third Line:

None specified.

Reference:

Guidelines For Antiretroviral Therapy In Ghana (2010) The Republic of Ghana National Guidelines for Prevention of Mother to Child Transmission of HIV (2014)

Exposed Infants

Year Issued:

2014

HIV/TB Co-Infection Addressed:

No

Criteria for Treatment:

All exposed infants will receive ARV Prophylaxis for 6 weeks

Regimen Options:

First Line:

Give AZT 12 hourly for 6 weeks

Alternative regimen:

NVP (use when AZT is contraindicated, eg. Anaemia or bleeding disorder)

Reference:

Guidelines For Antiretroviral Therapy In Ghana (2010) The Republic of Ghana National Guidelines for Prevention of Mother to Child Transmission of HIV (2014)

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