What's New in the Pediatric Guidelines

(Last updated April 7, 2021; last reviewed April 7, 2021)

The Panel on Antiretroviral Therapy and Medical Management of Children Living with HIV (the Panel) has reviewed previous versions of the *Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection* and revised the text and references. Key updates are summarized below.

April 7, 2021

Clinical and Laboratory Monitoring of Pediatric HIV Infection

- The Panel has added content about the use of telemedicine visits and telehealth communication in the care of children with HIV, including information about the characteristics and requirements for in-person clinic visits vs. telemedicine visits, see Table A.

What to Start

- Text and Table 7. Antiretroviral Regimens Recommended for Initial Therapy for HIV Infection in Children have been updated based on recent Food and Drug Administration (FDA) approvals and new data.
- With the release of a new, dispersible tablet formulation of dolutegravir (DTG), DTG plus two nucleoside reverse transcriptase inhibitors (NRTIs) is now recommended as a *Preferred* antiretroviral (ARV) regimen for infants and young children (aged ≥4 weeks and weighing ≥3 kg) rather than being limited to children aged ≥3 years and weighing ≥25 kg.
- Throughout the Guidelines, the Panel refers to Perinatal Guidelines for guidance about the use of DTG and other ARV drugs in adolescents and women of childbearing potential and those who are pregnant or are trying to conceive, with links to the updated Antiretroviral Counseling Guide for Health Care Providers.
- Bictegravir (BIC), which is available as a component of the fixed-dose combination (FDC) tablet bictegravir/emtricitabine/tenofovir alafenamide (Biktarvy), is now recommended as a *Preferred* ARV regimen for children aged ≥6 years and weighing ≥25 kg
- The Panel now recommends raltegravir (RAL) plus 2 NRTIs as an *Alternative* integrase strand transfer inhibitor-based regimen for children aged ≥4weeks, rather than *Preferred*, because of its twice-daily dosing requirement and lower barrier to resistance compared to DTG or BIC.
- The FDA has approved abacavir (ABC) for use in infants aged ≥3 months; however, based on reassuring safety data, the Panel recommends ABC plus lamivudine or emtricitabine as a *Preferred* dual NRTI backbone for use in infants and children aged ≥1 month.
- With the ability to use ABC in infants and young children, zidovudine (ZDV) is now recommended as an *Alternative* NRTI for use in infants and children aged ≥1 month.

What Not to Start

- Although maraviroc is now FDA approved for the treatment of CCR5-tropic HIV infection in full-term infants (weighing ≥2 kg) and treatment-experienced children, it is not recommended by the Panel for first-line treatment due to limitations that include multiple drug interactions, the need to be administered twice daily, and the requirement to perform tropism assays prior to use.

Management of Children Receiving Antiretroviral Therapy

- The sections on Modifying Antiretroviral Regimens in Children with Sustained Virologic Suppression on Antiretroviral Therapy and Recognizing Antiretroviral Treatment Failure have been updated to

incorporate the most recent ARV options, in line with pediatric ARV drug approvals and Panel recommendations.

Appendix A: Pediatric Antiretroviral Drug Information

Drug sections and Fixed-Dose Combination (FDC) Table 2 in this appendix were reviewed and updated to include new FDA approvals; pediatric data, and dosing and safety information; plus new formulations and FDCs. Significant changes are summarized below:

- Updates to Abacavir include new dosing information and summarize reassuring safety data supporting the Panel's recommendation to use ABC in infants aged ≥1 month, although it is FDA approved for use in infants aged ≥3 months.
- Based on studies about efficacy in clinical trials, etravirine (ETR) has been updated to include the Panel's recommendation that ETR be used as part of a regimen that includes a ritonavir-boosted protease inhibitor.
- Nevirapine (NVP) now includes data from IMPAACT 1115 about investigational NVP dosing for infants less than 1 month of age.
- Maraviroc (MVC) is now FDA approved for use in full-term infants (weighing ≥2 kg) and treatment-experienced children with CCR5 tropic HIV infection; however, as noted above, the Panel does not recommend MVC for use in ARV-naive infants and children.
- Raltegravir oral suspension and chewable tablet dosing tables for infants and children aged ≥4 weeks have been updated. Either oral suspension or chewable tablets can now be used for children weighing 3 kg to 20 kg. Instructions for preparing and administering crushed chewable tablets with liquid have been added.
- A new drug section was added for Cabotegravir (Vocabria) and the co-packaged long-acting injectable formulation, cabotegravir and rilpivirine (Cabenuva), with related updates in the Rilpivirine section. These new drugs are FDA approved for use in adults only

February 12, 2020

Dolutegravir

The Dolutegravir drug section has been updated to include the new dispersible tablet formulation that has been approved by the Food and Drug Administration for use in infants (aged ≥4 weeks and weighing ≥3 kg) and children. These changes will be reflected in other sections of the Guidelines to be published by early April 2021.

December 30, 2020

Maternal HIV Testing and Identification of Perinatal HIV Exposure

- Bulleted recommendations have been updated to point out that repeat HIV testing is recommended for pregnant women with a sexually transmitted infection or with signs and symptoms of acute HIV infection **(AIII)** and that expedited HIV testing during labor is recommended for those who are at increased risk of HIV infection and were not retested in the third trimester **(AIII)**.

Antiretroviral Management of Newborns with Perinatal HIV Exposure of HIV Infection

- In describing infants at high or low risk of perinatal acquisition of HIV and maternal risk factors for perinatal HIV transmission, viral suppression is defined as HIV RNA <50 copies/mL.
- Information about recommended antiretroviral drugs for infants with perinatal exposure to HIV-2

infection is available in Table 12 and HIV-2 Infection and Pregnancy.

- Table 12 has been updated to include dosing of dolutegravir dispersible tablets for oral suspension for HIV therapy, which can replace lopinavir/ritonavir, nevirapine, or raltegravir in infants at least 4 weeks of age and weighing at least 3 kg.
- Information about the two-drug regimen of nevirapine and zidovudine used in NICHD-HPTN 040/PACTG 1043 has been removed from Table 12 but is available in the text (see Two-Drug Antiretroviral Prophylaxis).
- Maraviroc (MVC) was approved recently for infants weighing ≥2 kg and may provide an additional treatment option for newborns of women carrying multidrug resistant HIV-1 that remains CCR5-trophic. However, the lack of data about MVC as prophylaxis or treatment in infants weighing <10 kg and the risk of drug interactions will limit its role for routine use in neonates.

Diagnosis of HIV Infection in Infants and Children

- Maternal HIV viral loads that categorize infants at a high risk of perinatal HIV transmission have been defined at HIV RNA ≥50 copies/mL.
- A statement has been added to clarify that HIV testing at birth might be considered when there are concerns that a newborn at low risk of perinatal HIV transmission may be lost to follow-up without testing.
- Content has been added about the potential for false-positive HIV nucleic acid tests (NATs) with chimeric antigen receptor T cell (CAR-T cell) and lentiviral-based gene therapy.