Pediatric Protocol

Children with HIV have medical options to improve their odds

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In each issue, POZ *publishes a different standard of care, a guide by which people with HIV and their care providers can make personal choices about health care regimes. HIV standards of care differ by region, treatment philosophy and patient population. The following guide to medical options for children (up to age 13) with HIV was prepared for* POZ *by the National Pediatric and Family HIV Resource Center. (Due to adolescents' biological changes and other special needs, treatment for teenagers is different and requires consultation with a specialist.)*

HIV infection in children often leads to serious illness more quickly than in adults and slows the process of growth and development. The opportunistic infections common in children tend to be different, with much higher numbers of bacterial infections and frequent involvement of multiple organs.

About a third of infants with HIV have rapid onset of serious symptoms and slow development. The other two thirds have slower progression and less serious problems such as swollen lymph nodes, enlarged liver or spleen or lymphoid interstitial pneumonitis (a lung disease).

Children's bodies may react to medicines differently from adults'. Unfortunately, available treatment options lag behind those for adults; many manufacturers are slow to test existing drugs for children's use or to develop special pediatric formulations.

Learn all you can about your child's medications, especially the precise dosages (usually different from those for adults) and possible side effects; read the small-print insert packaged with the drug bottle. Ask your doctor to recommend a helpful pharmacist, and get to know him or her. When serious symptoms develop, seek out a pediatrician with either infectious disease or immunology experience. (The National Pediatric and Family HIV Resource Center runs a helpline for practitioners only.) Ask questions of your doctor, nurse and pharmacist. Be honest with practitioners about all the treatments you give your child, including over-the-counter medicines, herbs and vitamins.

Discuss the chart below with your physician. Frequently children with HIV get typical childhood bacterial infections that recur or resist standard therapy. Treatment decisions should take into account your family situation, including past history of particular medication use and the likelihood of adhering to the treatment program for school-age children or children living with multiple

caregivers.

CONDITION	RECOMMENDED PREVENTION OR TREATMENT
OVERALL NEEDS	**Evaluations**: HIV-exposed infants should be seen monthly until their HIV status is determined. After that, both positives and negatives should be seen monthly until one year old. Past this age, positive children should have CD4 counts and percentages measured every three to six months and regular, careful developmental assessments to identify possible special needs. **Medical care**: Necessary vaccinations: DPT, MMR, Hepatitis B, Hemophilus Type B, inactivated polio (IPV) instead of OPV, Pneumococcal vaccine after age two, annual influenza vaccine. Varicella vaccine should not be given. Monthly intravenous immunoglobulin may be given to children with documented recurrent bacterial infections, difficulty making antibodies or those who live in high measles-prevalent areas.
CANDIDIASIS (THRUSH)	Nystatin* is standard first-line treatment, but its sugar content may cause tooth decay with prolonged or frequent use. Fluconazole* is also used for treatment or suppressive therapy for recurrent or severe thrush.
CMV (CYTOMEGALOVIRUS)	Ganciclovir or foscarnet are used for treatment and suppression of active serious disease, especially CMV retinitis.
HIV INFECTION	*Important: Guidelines for antiretroviral therapy in children are quickly changing. Decisions should be made with a physician experienced in treating HIV in children*. HIV positive mothers frequently give AZT* to newborns during the first 6 weeks of life to reduce their risk of acquiring infection. Ideally, the mothers will also have received AZT before and during birth. AZT* and TMP/SMX* (see below) are not used together during the first six weeks of life because of the risk of jaundice. AZT*, ddI* and ddC are the only FDA-approved anti-HIV drugs for children. Under special consideration, d4T and 3TC may be prescribed. Protease inhibitors are only available through clinical trials or compassionate-use protocols. A federal study found that in children new to antiretroviral drugs, ddI* alone or in combination with AZT* results in slower disease progression and less toxicities than AZT* alone. Children on ddI* alone had the lowest toxicity risk.
LIP (LYMPHOID INTERSTITIAL PNEUMONIA)	Steroids such as prednisone* are used for hypoxemia (low blood oxygen). Bronchodilators such as Proventil and Intal are sometimes used for symptoms of cough and wheezing. Oxygen is also sometimes needed.
MAC (MYCOBACTERIUM AVIUM COMPLEX)	**Prophylaxis**: Rifabutin for children 6-12 years with CD4 cells under 75. Azithromycin, clarithromycin* for all ages as alternatives. Clinicians differ on whether the benefits of prophylaxis outweigh the risks. **Treatment**: multi-drug therapy.

PCP (PNEUMOCYSTIS CARINII PNEUMONIA)	**Prophylaxis**: For all HIV-exposed infants and all HIV-infected infants from 4-6 weeks to one year old: TMP/SMX* is used regardless of CD4 counts (which at this age are not good predictors of PCP risk). Prophylaxis is stopped when HIV infection has been reasonably excluded. For a positive child 1-5 years of age, prophylaxis is based on CD4 under 500 or under 15 percent; from age 6-12, CD4 under 200 or under 15 percent. Dapsone or aerosolized pentamidine (for children over five) or IV pentamidine are used if TMP/SMX* is not tolerated. Lifelong prophylaxis is needed for a child who has had PCP. **Treatment**: Use higher doses of the same medications and steroids.
TB (Tuberculosis)	If exposure is suspected, especially in areas with multi-drug resistant TB, an infectious disease specialist is needed.
Toxoplasmosis	**Prophylaxis**: TMP/SMX* as for PCP prophylaxis. Alternative: Dapsone, pyrimethamine and leucovorin combination. **Treatment**: Consult infectious disease specialist.

*Medicines available in liquid form.

Note: Not all recommended uses for children reflect FDA-approved labeling.

***Source**: National Pediatric and Family HIV Resource Center, Newark, New Jersey, 1996.*

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