UNIVERSITY OF CAPE TOWN

A quick guide to the clinical care of children infected with HIV

This fact sheet provides an easy 'pin-up' summary of the Department of Health protocols for each of four key interventions for children infected with HIV.
The full set of guidelines for each intervention are contained in the relevant Department of Health documents.

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Children's Institute

INTRODUCTION

Children that have acquired the HIV-virus require specific care and follow-up at health facilities to ensure their optimal growth and development and to minimise their chances of acquiring other life-threatening infections. A recent rapid survey of 385 clinics throughout South Africa conducted by the Children's Institute and Child Health Unit showed that the care of HIV-infected children at clinics is not yet optimal. Many health workers were not sure what the correct management protocols were for prophylaxis and other support treatment for HIV-positive children. In addition, clinics did not always have the required treatments and diagnostic tests available. Care for HIV-infected children requires a comprehensive management strategy. This fact sheet focuses on 4 of the key clinical care interventions.

Four of the key interventions required by children living with HIV are:

- *Prophylactic antibiotics* to reduce the risk of Pneumocystis Carinii pneumonia (PCP)
- *Prevention, diagnosis, treatment and follow-up of children with, or exposed to, TB* as children with HIV are prone to being infected with TB.
- *Nutritional supplementation* as children with HIV are prone to malnutrition by virtue of their underlying condition, as well as the social and economic circumstances they face.
- *Supplementary micronutrients*, specifically Vitamin A to increase their immunity and ability to fight common infections, particularly respiratory and gastrointestinal infections.

Several guidelines had been developed for health workers on the management of the above issues. These guidelines include:

- "Managing HIV in Children" Department of Health, March 2000.
- The South African Tuberculosis Control Programme Practical guidelines 2000.
- The Vitamin A supplementation policy guidelines
- The Integrated Nutrition Programme (INP) guidelines
- The Integrated Management of Childhood Illnesses guidelines

COTRIMOXAZOLE PROPHYLAXIS TO PREVENT PCP

Pneumocystis carinii pneumonia (PCP) is a major cause of morbidity and mortality in young infants who are HIV positive. Cotrimoxazole(Bactrim) prophylaxis prevents PCP as well as other bacterial infections.

Prophylaxis for children born to mothers who are HIV-positive(under 15 months of age)

The Department of Health guidelines specify that symptomatic HIV-infected children and *all asymptomatic ELISA positive children* should be given cotrimoxazole from 4-6 weeks of age up to 15 months of age, unless it can be proven before this time that the child is not HIV-infected.

Prophylaxis for children older than 15 months who are known to be HIV-positive

- Older children should be given prophylaxis only if their CD4 count falls below 15% or after an episode of PCP.
- If CD4 counts are not available (as is the case in most parts of South Africa) then all symptomatic children should be given prophylaxis for life.

Dosage of Cotrimoxazole(Bactrim)
Cotrimoxazole can be given once daily 5 times a week or twice daily 3 times a week on consecutive days. The dose is according to weight as indicated in Table 1 below.

Table 1: Approximate doses for Cotrimoxazole prophylaxis

Weight	Cotrimoxazole
< 5kg	2.5ml
5-9.9 kg	5ml
10-14.9 kg	7.5ml
15-21.9kg	10ml or 1 tablet
>22 kg	15 ml or 1.5-2 tablets

Source: Managing HIV in children. Department of Health, March 2002

TB-CONTACT TRACING, DIAGNOSIS AND FOLLOW-UP

Tuberculosis is the most common opportunistic infection in HIV infected persons. Children must be given appropriate prophylaxis if they are exposed to TB contacts. If TB disease is suspected, they must be correctly diagnosed and treated for TB. The following guidelines are from Tuberculosis Control Programme guidelines 2000.

TB prophylaxis

Prophylaxis is given to:

- HIV infected children who have had household contact with sputum-positive patients
- Children who are mantoux positive (mantoux reactions of 4mm or greater)

Children under 5 years must receive INH prophylaxis for 6 months. Dosage for INH is 5mg per kg.

NB!! ALL contacts must be followed up and treated to decrease risk of the child developing TB.

Diagnosis and treatment

The Diagnosis of TB in children is difficult, as children are not readily able to produce sputum for positive identification of the TB bacillus.

The diagnosis of TB in children is thus based on a combination of:

- Contact history
- Clinical features
- Chest X-ray
- Tuberculin skin test

HIV infection makes the diagnosis of TB in children even more difficult because:

- Other HIV-related chest infections have similar symptoms to TB
- Weight loss is common in HIV-infected children
- The tuberculin skin test is often falsely negative
- X-ray features are often atypical.

Treatment of children with TB

- Treatment is given 5 times a week. If conditions do not allow this, treatment can be given 3 times a week.
- Treatment is for 6 months, which is divided into a 2-month initial phase and 4-month continuation phase.
- For the first 2 months children must get a combination tablet RHZ(Rifampicin, INH and Pyrazinamide).
- For the 4-month continuation phase they get a combination tablet RH(Rifampicin and INH).
- *Dosage must be adjusted according to the child's weight*

Table 2: Dosages for TB treatment in children

Pre-treatment body weight	2-month initial phase RHZ 60/30/150 mg R= Rifampicin H= INH Z= Pyrazin-amide	4-month continuation phase (treatment 5 times a week): RH 60/30 mg **NOTE: for the 3 times a week treatment, the RH tablet is replaced by the 60/60 mg one.*
3-4	1/2 tablet	1/2 tablet
5-7	1	1
8-9	1 1/2 tablet	1 1/2tablet
10-14	2 tabs	2 tabs
15-19	3 tabs	3 tabs
20-24	4 tabs	4 tabs
25-29	5 tabs	5 tabs
30-35	6 tabs	6 tabs
Note Refer to weights before treatment for all regimens		

Source: South African Tuberculosis Control Programme Guidelines 2000

- All children with severe forms of TB such as bone TB or meningitis must be referred to hospital.

NUTRITIONAL SUPPLEMENTATION

All children who fail to grow adequately, especially those below the age of two years, should be included on the food supplementation programme, the Protein Energy Malnutrition Scheme(PEM). Ideally all HIV-positive children should be included on the scheme, irrespective of their anthropometric measurements, given their extreme vulnerability to many health conditions. Appropriate alternate nutritional supplementation and advice must be given if the PEM scheme is not available.

VITAMIN A SUPPLEMENTATION

HIV-positive children are at high risk of malnutrition and other common childhood infections. Vitamin A supplementation helps to boost their immunity and improve their overall nutritional and health status.

How much Vitamin A must be given?

The Department of Health Guidelines state that *all HIV-infected children* should be given Vitamin A supplements according to the following schedule:

- < 6 months – 50 000 i.u
- 6 to 12 months – 100 000 i.u
- > 12 months– 200 000 i.u

*The dosage is repeated at 6-monthly intervals.
*Children with severe malnutrition, diarrhoea and measles must be given an additional dose 24 hours later

A copy of all guidelines can be obtained free of charge from:
The Director General Department of health
Private Bag X828 Pretoria 0001

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