HIV TESTING IN YOUNG CHILDREN

This technical brief is for policy makers and programme managers. It provides a summary of World Health Organization (WHO) guidance on testing policy, HIV testing technologies and diagnostic approaches, and disclosure of HIV test results for young children aged 0-10 years. Readers are advised to refer to the following three comprehensive WHO documents covering technical and policy aspects of provider-initiated testing on which this technical brief is based:


Why is it so important to test children?

Early treatment saves children’s lives. The WHO recommends initiation of antiretroviral therapy (ART) for children under 24 months as soon as HIV infection is diagnosed, and for older children based on clinical disease and the degree of immunosuppression. Many HIV-infected infants and children die from HIV without their HIV status being known or entering HIV care.

The goal of testing is to identify HIV infected infants and children prior to the development of clinical disease and reduce their mortality through earlier access to care and treatment. Among HIV-exposed infants who are uninfected (HIV negative), it is also an opportunity to plan and counsel on appropriate infant feeding to reduce the risk of future infection (for example from breastfeeding) while maintaining adequate nutrition and health. Testing and counselling should be delivered to children through a rights-based approach in a non-judgemental, non-discriminatory, child-friendly and age-appropriate manner.

When should an HIV test be considered?

In all epidemic contexts, HIV testing should be offered to all infants and children born to HIV positive women and children from families where another sibling or parent has HIV. In addition, in generalized epidemics all children attending clinical services (including immunization clinics) should be tested. In concentrated epidemics testing is recommended as part of the standard of care for all infants and children who present with signs that could indicate HIV infection, including e.g. children receiving TB services and children treated for malnutrition.

There are considerable benefits to testing children at an early age. However, it cannot be assumed that older children of mothers with unknown HIV status or mothers known to be positive, do not require testing because increasing evidence shows that children infected vertically can survive into teenage years without being diagnosed. HIV testing should also be offered to all older children of HIV positive mothers and to older children in all clinical settings in generalized epidemics.

Where should testing take place?

Opportunities for testing young children will predominantly occur in, but should not be limited to, the following settings:

1. Maternal health services: antenatal/ postnatal services for prevention of mother to child transmission (PMTCT)
2. Child health services: immunization and malnutrition clinics, inpatient units
3. Adult treatment and testing services: infants and children of HIV positive adults
4. Home-based testing initiatives: targeting whole families at the same time
5. Programmes for vulnerable children
Can consent be obtained from children?

While it is not appropriate to seek consent from a child, it is important in all cases to involve the child in the process of testing and gain their assent. Parents, guardians, or other caregivers usually provide consent for HIV testing on behalf of their children, as they would for any medical procedure.

Legal and policy requirements for HIV testing and counselling of young children, including written or verbal consent procedures, vary by country. Verbal consent is normally all that is required. National consent policies need to offer clear protocols that protect children’s rights, including access to medical care. It should be recognized, however, that a diagnosis of HIV in a child has important consequences for the whole family.

Special circumstances

Laws and policies setting out the rights of children and the age that defines a child also vary by country. It is therefore important that country-specific policies are developed. However as with any medical intervention, HIV testing becomes an ethical priority if it is clinically necessary to support life saving treatment, such as initiation of ART.

In all circumstances the best interests of the child should be the guiding principle. For example, where there is no living parent or guardian, an informal guardian or healthcare worker should be able to provide consent.

Policy on the testing of infants and young children should address the following circumstances:
- Orphaned and vulnerable children (including street children)
- Children before adoption
- Infants who have been abandoned
- Children who have been sexually abused
- Children living in child-headed households
- Children living with “custodial guardians”

Refusal of testing for a young child

Parents or caregivers may feel that they have their child’s best interest in mind when refusing an HIV test, but this refusal may mean the child is unable to access life-saving interventions. Providers need to understand both what is in the best interests of the child and when it is their duty to provide testing for children. They should be aware that testing an infant or young child may reveal the child’s mother’s HIV status as well, and that caregivers may refuse to allow testing based on this or other reasons. Fathers should also be involved and included in testing procedures where possible.

Caregivers may need to be supported in making the decision to test their children. If a parent refuses to consent, and/or disclose his/her own HIV status, referral to and follow up at a centre experienced in child HIV management may be required.

How and when should disclosure take place?

Where testing is not performed at point of care, confirmed test results should be delivered to caregivers as soon as possible and positive results should be fast-tracked to enable prompt initiation of ART especially in children under 2 years of age. Children have a right to have their HIV status kept confidential. Providers must be clear to whom, when and how best they can disclose a child’s status.

Post-test counselling with the caregiver should include discussion on how to disclose to the child using information appropriate to the child’s age. School age children can be told of their HIV+ status, while younger children may be informed in an age-appropriate manner in preparation for full disclosure. Disclosure can have health benefits and does not cause lasting psychological or emotional harm. Deception should be avoided. Healthcare workers should continuously support caregivers in their efforts to disclose to the child. It is helpful to identify a person with whom a child can discuss any worries and ask questions.

The caregiver should be involved in the disclosure process and in partnership with the healthcare provider, can decide the best time and place to disclose to the child. Issues to consider include:

1. Advising culturally and age appropriate ways to disclose
2. Preparing for children’s reactions and questions
3. Identifying what children (and caregivers) need to know about HIV
4. Planning for the future and how to disclose to others

Disclosure to a young child is a gradual process as they grow in understanding and emotional maturity. Healthcare workers should be prepared to provide additional support for disclosure - including understanding the relationship between child and caregiver, how to reduce stigmatization of the child and caregiver and how to protect the privacy of the child’s HIV status. Job aids should be provided for paediatric HIV counselling and disclosure strategies.

---

**Child testing procedures**

In infants exposed to HIV, the mother’s antibodies to HIV may be found in the child’s blood for up to eighteen months of age. As a result, antibody tests may be positive in all HIV-exposed infants below this age irrespective of whether they actually have HIV. Accurate diagnostic testing for infants below 18 months requires virological testing. Where virological tests are unavailable regular clinical monitoring should take place until the child is 18 months of age, at which point antibody tests can be used.

There are several choices of both viral and antibody assays; the appropriate assay may depend on setting, availability of resources and expertise. Age-appropriate algorithms are essential for undertaking HIV testing in young children and should be aligned with WHO recommendations. It is important that caregivers clearly understand the whole testing process as well as the significance of attending follow-up tests and appointments. Providers should be capable of communicating this information.

**Figure 1.** Testing sequence for HIV-exposed child

![Testing sequence for HIV-exposed child](image_url)


---

**WHO HIV TESTING & COUNSELLING**

http://www.who.int/hiv/topics/vct/en/index.html

Email: hivtc@who.int
Quality Assurance

Accuracy in HIV testing is crucial and quality assurance programmes are essential for all clinics and labs performing HIV testing. This includes an assessment of the performance of all the assays used. Having highly accurate tests does not guarantee reliable laboratory results. Many processes are involved from the time the specimen is collected and until results are reported, during which errors can occur. A confirmatory test with a second different assay and specimen is recommended for all tests that are initially positive. National guidelines should be followed for discordant results (where the two tests do not agree).

Where in-house assays are being used, their sensitivity and specificity must be determined, standardized and validated by the National Reference Laboratory and according to the WHO recommendations. Well-defined standard operating procedures following validated testing algorithms are important to ensure quality and consistency of testing and reporting.

Which HIV services should testing link to?

PMTCT should be linked to services at which the HIV-exposed infant or child has access to testing so that early diagnosis can be made. Testing services should then connect with services that offer long-term follow up and ART initiation.

Providers offering tests to children should pay special attention to ensure that infected infants and children are linked to care and treatment services. In some cases a vulnerable child’s situation may have put them at high risk of HIV infection, such as from sexual abuse, so there may be a need to recognize this and provide psychological as well as physical and legal support. Children presenting within 72 hours of an alleged sexual assault/rape should be offered post exposure prophylaxis (PEP), and national medico-legal policies and procedures should be followed.

---

HIV testing in young children: Summary

- Early testing, diagnosis and treatment in HIV infected infants and young children reduces their morbidity and mortality
- Testing young children is more straightforward than many healthcare workers imagine; many of the diagnostic challenges have been overcome by technological improvements to child testing methods.
- Healthcare providers should not hesitate to initiate child HIV testing and counselling
- Policy and guidelines may need to be revised to reflect who is responsible for testing and referring children for treatment, to clarify age-appropriate consent and disclosure procedures, and to account for the special circumstances of children without parents or guardians.
- Antibody testing may not be diagnostic for children under the age of 18 months. Virological testing for this age group is recommended
- Ongoing quality assurance is essential to guarantee reliable laboratory results
- Age-appropriate algorithms should be available at all testing centres, supported by well-defined standard operating procedures for laboratory testing; they should be developed in accordance with the WHO recommendations.
- Paediatric focused HIV counselling and disclosure training and job aides will be required for healthcare workers.

---

This is the second in a series of Technical Briefings to be produced on HIV testing and counselling. All are based on existing WHO guidance and aimed at policymakers. Please refer to the WHO recommendations on the diagnosis of HIV infection in infants and children (http://www.who.int/hiv/pub/paediatric/diagnosis/en/index.html) for more detailed information relating to this Technical Briefing. Look out for further Briefings on Child Testing, Community Testing and Couples Counselling on the WHO website http://www.who.int/hiv/topics/vct/en/index.html