



Scale-up of HIV-related prevention, diagnosis, care and treatment for infants and children: a Programming Framework

Condensed Guide

Purpose

The Programming Framework was developed to enable national programmes to be able to comprehensively address the needs of HIV-exposed and HIV-infected infants and children. It details seven strategies for scaling-up, and outlines the specific actions required to operationalise these strategies. While the framework focuses largely on the needs of countries with high HIV burden, it may also be relevant to settings within countries with lower HIV prevalence.

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BACKGROUND



The global burden of paediatric HIV is not diminishing. Recent estimates from UNAIDS suggest that about 2.0 million children younger than 15 years of age have HIV, about 90% of whom live in sub-Saharan Africa. This number continues to grow. An estimated 370,000 children were newly infected with HIV in 2007 alone, the vast majority through mother-to-child transmission. Almost all of these infections could be avoided by interventions to prevent mother-to-child transmission of HIV.

HIV infection follows a more aggressive course among infants and children than among adults, with as many as 50% of HIV-infected children dying by age 2 years (30% by age 1 year) without access to co-trimoxazole prophylaxis and antiretroviral therapy. Accordingly, HIV has significantly affected child survival in certain parts of the world, and HIV-related mortality exceeds 50% in the most severely affected countries. Worldwide in 2007, an estimated 270,000 children younger than age 15 years – the vast majority in sub-Saharan Africa – died of causes related to HIV. Children with HIV surviving the first year of life are more likely to die from common childhood illnesses, with the most common causes of death being respiratory infections, diarrhoea and tuberculosis; morbidity and mortality from all of these causes is exacerbated by poor nutritional status.

Numerous studies have shown that children respond as well to antiretroviral therapy in resource-limited settings as in high-income countries. While progress has been made in resource-limited settings in developing services for HIV-infected children (close to 200,000 children receiving antiretroviral therapy in such settings at the end of 2007), challenges to more comprehensive scale-up remain, including low uptake of co-trimoxazole prophylaxis (4% of the estimated 4 million children in need) and slow operationalisation of diagnostic protocols for HIV testing in younger infants.

HIV care and treatment for children should be scaled up in accordance with a public health approach and underpinned by the following principles: urgency, universal access, life-long care, family-centred care and high-quality care. It is critical that interventions both be delivered at scale and integrated into existing and strengthened child health services.

COMPONENTS OF THE CARE PACKAGE FOR CHILDREN WHO ARE EXPOSED TO OR HAVE HIV

Appropriate care and treatment for children who have HIV includes, at a minimum, the interventions required to address infant and child mortality. Defining an essential package of such interventions, therefore, is a critical first step for country programmes. Essential child survival interventions within the package of care should include newborn care interventions, prevention interventions, and treatment interventions. Such a package should be based on local needs and epidemiology; include preventive measures that may reduce the likelihood of exposure leading to disease; address HIV prevention, diagnosis, care and treatment; and be reflected in national strategic, operational and implementation plans. Detailed recommendations for these are available on several web sites including WHO and UNICEF.

Interventions for HIV-exposed and infected infants and children should also be included in the package of care. HIV-exposed or –infected infants and children require antiretroviral prophylaxis for mother and infant; early and regular clinical assessment; provider-initiated HIV testing; counselling and support for optimizing nutrition and young child feeding; co-trimoxazole prophylaxis; screening, prevention and management of tuberculosis; early antiretroviral therapy; treatment adherence support; regular clinical and laboratory monitoring; psychosocial support; and care, treatment and support for their family members.

Elements of the basic package of care requiring additional attention in the context of HIV

- *Nutrition, infant and young child feeding:* Appropriate feeding of infants and young children is central to optimizing their health and development. Women living with HIV are recommended to exclusively breastfeed their child for the first 6 months of life unless replacement feeding is acceptable, feasible, affordable, sustainable and safe for them and their infants. Weaning is recommended only if and when a safe diet adequate in nutrition can be maintained.
- *Regular monitoring of growth and development:* Children's growth reflects their health and nutritional status. Growth failure is common among HIV-infected children, and in HIV-exposed infants poor growth may indicate HIV infection. For HIV-infected children, regular, ongoing follow-up and monitoring of growth are essential to document the progression of HIV and the response to treatment, including antiretroviral therapy.
- *Management of severe malnutrition:* HIV-exposed and HIV-infected children with severe malnutrition should be managed according to WHO or other appropriate national guidelines.
- *Prevention, active early detection and management of common and opportunistic infections:* Incidence and/or severity of certain common infections (e.g. pneumonia, diarrhoea, malaria) may be more pronounced in children exposed to or infected with HIV. More intensive preventive and curative measures are often therefore needed.



Co-trimoxazole prophylaxis: Co-trimoxazole prophylaxis prevents pneumocystis pneumonia and other infections and reduces morbidity and mortality in HIV-infected infants. All HIV-exposed children should start co-trimoxazole prophylaxis at 4-6 weeks after birth and continue until HIV infection has been excluded and the infant is no longer at risk of acquiring HIV through breastfeeding; HIV-infected children should continue co-trimoxazole prophylaxis as per WHO or other appropriate national guidelines.

HIV Testing: Missed opportunities for HIV testing of infants and children result in increased mortality and/or late initiation of antiretroviral therapy. Provider-initiated HIV testing and counselling for infants and children should be implemented within health care services.

Specific HIV testing interventions important for infants and children include: early HIV viral testing at or around age 4-6 weeks for all HIV-exposed infants; and where HIV is suspected or HIV exposure is identified, including when a family member is diagnosed with HIV.

The following elements of care are required for children diagnosed with HIV:

- **Antiretroviral therapy and follow-up care:** WHO has published technical guidelines outlining antiretroviral therapy care for infants and children, which have been updated to emphasize early diagnosis and treatment (<http://www.who.int/hiv/pub/guidelines/art/en/index.html>), including the recommendation of immediate initiation of antiretroviral therapy for all infants diagnosed with HIV infection under the age of one year.
- **Adherence and treatment support:** The concept of adherence to treatment needs to consider both the child and caregiver, and requires commitment and involvement on the part of the caregiver.
- **Psychosocial support:** Families, caregivers and children who have HIV also need access to other essential services such as counselling and support for children and caregivers; disclosure support; and mitigation of stigma.
- **Tuberculosis:** HIV increases susceptibility to infection with and morbidity and mortality from tuberculosis, and tuberculosis should always be considered in children who have HIV.



KEY STRATEGIES FOR SCALING UP HIV DIAGNOSIS, CARE, SUPPORT AND TREATMENT FOR CHILDREN

Greater detail on each of these is available in the Programming Framework

STRATEGY 1: Enhance government leadership, ownership and accountability by strengthening established management and coordination structures to ensure appropriate response to the needs of children who are exposed to or have HIV by developing supportive policies, setting national targets and developing budgeted national plans for scaling up directed towards reaching all children in need.

Effective leadership, ownership, programme management and coordination capacity are needed at the national and sub-national levels (such as districts) to promote and support the scaling up of HIV programmes for children and to ensure that high-quality care is provided.

Relevant Actions

- Conduct a situational analysis. An initial rapid but systematic situational analysis should be performed to assess current programming, including key health system bottlenecks, and used to guide the national strategic and implementation plan that addresses child health and HIV.
- Establish targets. National treatment targets for children are essential to scale-up.
- Ensure that management and coordination structures address HIV care and treatment for children. Management structures should provide programme direction for services for HIV programmes for children, ensure coordination among and across stakeholders and oversee programme planning, implementation, monitoring and quality at the national and sub-national levels

STRATEGY 2: Integrate service delivery of HIV prevention, diagnosis, care, treatment and support for children into existing services such as HIV and maternal and child health and decentralize the provision of core components of the HIV care and treatment package for children to the lowest appropriate and feasible level of health care delivery.

Relevant Actions

- Integrate HIV diagnosis, care, treatment and support into existing HIV care and treatment services. Specific training sessions related to children may be needed to fully capacitate clinicians not normally accustomed to treating children.

- Integrate HIV diagnosis, care and treatment for children into existing maternal, newborn and child health programmes.
- Decide which interventions for HIV care and treatment for children can be decentralized to which existing health delivery points. The benefits of decentralization, however, must be balanced with the ability of the health care system to provide high-quality services.
- Utilize communities for early identification and provision of care, including delivery of the basic package of services, such as co-trimoxazole prophylaxis and antiretroviral therapy adherence.

STRATEGY 3: Governments should promote the enhanced early identification of infants and young children who are exposed to or who have HIV.

Most children born to women known to be living with HIV are not being systematically monitored and followed-up during the postpartum period. HIV-exposed children must be followed-up to avoid postpartum HIV transmission, improve infant health outcomes and identify HIV-infected infants early, so that they may access care and treatment in a timely fashion.

Relevant Actions

Optimizing follow up of HIV-exposed infants

- Ensure updated policy and technical guidance supporting the follow-up of HIV-exposed infants identified through services for preventing mother-to-child transmission.
- Document information on receipt of services for preventing mother-to-child transmission on maternal and child health cards. This can facilitate follow-up of the infant.
- Use DBS filter paper to facilitate early virological diagnosis. This approach is relatively easy to operationalise. Preliminary data from Botswana, Rwanda and South Africa indicate notably increased numbers of HIV-exposed infants being tested as a result of this intervention.

Identifying infants and children who have HIV

- Implement provider-initiated testing and counselling at sites likely to yield a high volume of positive test results. Protocols should be established for counselling and testing of hospitalized children, children in malnutrition clinics, children with tuberculosis and children younger than 5 years with other signs and symptoms suggesting HIV infection.
- Institutionalize a family-centred approach and secure HIV testing for all additional family members once an index case is identified. HIV may cluster within families.
- Use IMCI and IMAI approaches to identify infants and other children at peripheral sites and refer them for HIV testing. First-level health care workers should be trained in recognition of a child who may have HIV (as in the HIV-adapted IMCI approach).
- Use community health workers to facilitate entry to diagnosis and care services.
- Consider whether health care sites caring for infants and young children in hyperendemic settings should implement interventions to determine HIV exposure status for whom this information is not documented.

STRATEGY 4: Governments should develop reliable procurement and supply management mechanisms that ensure a consistent supply of medicines and commodities that meet the needs of children.



In the context of HIV diagnosis, care, support and treatment for children, a well-functioning supply system is critically important to ensure that people who need antiretroviral therapy, prophylaxis against and management of common opportunistic infections and other commodities for routine care can access them when and where they need them.

Relevant Actions

- Ensure that supply management is appropriately coordinated among supply stakeholders and also linked to the overall implementation plan. This can be done via joint work planning and budgeting between partners and across involved government departments.
- Foster the integration of supply systems by ensuring that programmes are introduced and scaled up based on what exists and build capacity where it is lacking.

STRATEGY 5: Governments should ensure laboratory capacity for early diagnosis of HIV infection among infants and children and routine monitoring for HIV care and treatment.

National programmes need to extend the capacity of existing laboratory services to be able to provide and communicate results to facilities and families of early infant virological testing for HIV, as well as to ensure services for CD4 determination, aiding clinical decision-making on initiating treatment and/or prophylaxis for infants and children.

Relevant Actions

- Plan for laboratory service expansion to accommodate early infant testing for HIV to facilitate timely access to treatment, and routine immunological monitoring.
- Select assays for virological diagnosis with the involvement of key staff from the national reference laboratory and officials in the health ministry working on HIV care and treatment for children.
- Develop systems for the timely and reliable use of laboratory results. For DBS or other specimens collected and transported to the diagnostic laboratory, the promptness and reliability of the systems should be evaluated at each point in the chain of events.
- Provide staff with appropriate education and training to ensure high-quality diagnostic services.

STRATEGY 6: Strengthen community-based capacity to identify possible cases of HIV and refer for testing and to provide follow-up care and support for infants and children who have HIV.

Community-based strategies provide an important way of optimizing continued care, support and treatment for children who are exposed to or who have HIV, particularly for families living far from health centres. Interventions in the community are particularly important for children, who depend on caregivers being able to access beneficial services within their communities.



Relevant Actions

- Integrate community-based approaches into child health and HIV programming strategies. For community health workers to be effective, their workload must be manageable and fit within their other responsibilities.
- Accelerate case-finding through integration into community-health programmes. Community options for case-finding can be built on existing community health services, such as regularly-scheduled outreach maternal-child health services and the delivery of integrated services through child health days, community IMCI, home-based care and community nutrition programmes and other child care activities driven by nongovernmental and community-based organizations. A structured approach to case-finding should be encouraged.
- Improve case follow-up and essential care for HIV-exposed newborns and their families.
- Enhance community capacity to provide care and support. Community health workers can play an instrumental role in sustaining long-term delivery of cotrimoxazole prophylaxis and antiretroviral therapy, counselling for infant feeding choices and the timely referral of infants with signs and symptoms of HIV infection.
- Promote child survival through nutrition, immunization, malaria, and tuberculosis interventions.
- Norms for confidentiality and disclosure should be adapted specific to community settings

STRATEGY 7: Governments should promote strengthened monitoring and evaluation systems that enhance the provision of high-quality care for children who are exposed to or who have HIV.

To assist governments in better monitoring national progress toward eliminating perinatal HIV infection in infants and ensuring universal access to prevention, treatment, care and support for mothers and children, WHO and UNICEF recently reviewed and revised existing guidance on monitoring and evaluation of services for preventing mother-to-child transmission, antiretroviral therapy and HIV care and support.

Relevant Actions

- Governments should include core indicators of services for preventing mother-to-child transmission and HIV care and treatment for children in national monitoring and evaluation frameworks to monitor and support national scale-up efforts
- Efforts to systematically monitor programme effectiveness and quality should be strengthened and expanded.



RESOURCES

Additional resources, including websites, guidance materials, and more are available in the full programming framework "Scale Up of HIV-Related Prevention, Diagnosis, Care And Treatment For Infants And Children. A Programming Framework" which can be found at:

WHO: http://www.who.int/hiv/paediatric/Paeds_programming_framework2008.pdf

UNICEF: http://www.unicef.org/aids/index_documents.html