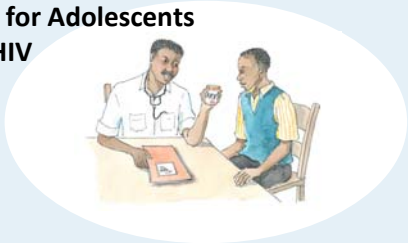
Adolescent HIV Care and Treatment

Module 3:

Clinical Care for Adolescents Living with HIV



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COLUMBIA UNIVERSITY
Mailman School of Public Health

Module 3 Learning Objectives

After completing this module, participants will be able to:

- Discuss the needs of adolescents who acquired HIV perinatally versus those who acquired HIV during childhood or adolescence
- Discuss the importance of comprehensive care for ALHIV
- Define the package of HIV-related care and treatment for adolescents

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Session 3.1

HIV Acquisition — Modes and Implications for Care and Treatment

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Session 3.1 Objective

After completing this session, participants will be able to:

- Discuss the needs of adolescents who acquired HIV perinatally versus those who acquired HIV during childhood or adolescence

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HIV Transmission in Adolescents

There are 2 groups of ALHIV:

- Adolescents who acquired HIV perinatally
- Adolescents who acquired HIV during childhood or adolescence

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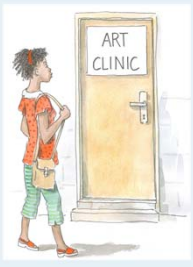
Discussion Questions

- *How many adolescents living with HIV are you currently caring for in your clinical setting?*
- *How many of the adolescents who receive care in your clinic acquired HIV perinatally versus behaviorally (that is, during childhood or adolescence)?*



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Discussion Questions

- *What some of the similarities or differences you have noticed between adolescents who were perinatally infected versus those who were behaviorally infected?*
- *How might their challenges differ based on whether they were perinatally vs. behaviorally infected?*

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Adolescents Who Acquired HIV Perinatally

- Acquired HIV via MTCT
- More HIV-infected children are now surviving into adolescence and adulthood because of the availability of HIV treatment programs
- May have been enrolled in HIV care since infancy, or identified later in life during an acute illness or through routine testing
- Some may have initiated ART in infancy and taken various ART regimens by the time they reach adolescence
- Others may still be taking the initial regimen they started during early childhood

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Adolescents Who Acquired HIV Perinatally (Continued)

- Many have been "missed" by the health care system, despite being symptomatic
- May or may not have been fully disclosed to (depending on their age and their caregivers)

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Challenges – Perinatally-acquired HIV

- Disclosure to the child
- Mother's acceptance of her HIV-status
- For the family: Demands of caring for a child/adolescent with chronic HIV infection
- Developmental delays and physical disabilities in the child/adolescent
- The complexity of living in a home affected by HIV, particularly if caregivers are unemployed, unwell, or have died

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Adolescents Who Acquired HIV During Childhood or Adolescence

- Probably acquired HIV through one of the following:
  - Sexual intercourse
  - Sexual abuse, including rape
  - Less frequently, through blood transfusion, sharing cutting/piercing instruments, or injecting drug use
- May have recently learned their HIV-status and have generally not had extended contact with the health system; often identified via HIV testing programs
- Some adolescent girls are identified when they seek ANC and receive routine testing as part of PMTCT services
- May be well (stage 1 or 2); even if not eligible for ART, they still need ongoing care, support, and monitoring for ART eligibility

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Challenges – Behaviorally-acquired HIV

- Acceptance of HIV-status
- Disclosure to family, partner, and peers
- If raped or abused, dealing with the emotional and physical repercussions of that experience

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Common Challenges Faced by All ALHIV

- Both adolescents with perinatally-acquired HIV and those who acquired HIV during childhood or adolescence may have issues related to:
  - Retention in care, especially if not eligible for ART
  - Adherence to ART
  - Positive living and positive prevention
  - Stigma and discrimination
- Both groups likely worry about their futures and about finding a partner/starting a family
- See Table 3.1 for more information.

Remember: These are generalizations. Each adolescent is unique!

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Questions or comments on this session?

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Session 3.2

The Package of Adolescent HIV Care and Treatment Services

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Session 3.2 Objectives

After completing this session, participants will be able to:

- Discuss the importance of comprehensive care for ALHIV
- Define the package of HIV-related care and treatment for adolescents

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Discussion Questions

- *Who has completed training in pediatric HIV care and treatment?*
- *Who has completed training in adult HIV care and treatment?*
- *Can you recall some key differences and similarities between providing HIV care and treatment services to adolescents and providing these services to children or adults (from Module 2)?*

Remember: Adolescents are neither big children nor little adults! Adolescent HIV care and treatment draws on the knowledge and skills learned in both pediatric and adult trainings.

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Approaches to Service Provision

- As with HIV care and treatment programs for children and adults, HIV programs for adolescents should include a broad package of services and support, including much more than the provision of ART.

The goals of comprehensive HIV care are to:

- Reduce HIV-related illness and death
- Improve quality of life
- Improve the lives of families and communities affected by HIV
- Prevent further spread of HIV

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Approaches to Service Provision
(Continued)

Adolescents with perinatally-aquired HIV:

- Have typically been in care since they were young (although this may not always be the case)
- Likely began their experience in HIV care when they were children, under care of health workers with expertise in pediatrics (who following pediatric guidelines)
- Have typically been on ART for many years and may even be on 2nd or 3rd line regimen
- Often look young for their age and, due to developmental delays, are often young socially as well

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Approaches to Service Provision
(Continued)

Adolescents who acquired HIV during childhood/adolescence:

- May be socially experienced, possibly more so than their peers
- May be relatively inexperienced in terms of navigating the health care system and dealing with health workers
- Are typically clinically treated as adults, with their treatment directed by adult guidelines

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Remember:

- **Regardless of how long they have been infected or how they acquired HIV, the package of care for all ALHIV is very similar.**
- The approach for all adolescents should be family-centered and developmentally appropriate.
- While the components of the adolescent package of HIV care closely resemble those of the adult package, **the way** these components are delivered has an important impact on their uptake and success among adolescents.

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Overview of the Package of Care for ALHIV

To be effective, adolescent services must:

- Be integrated
- Be age and developmentally appropriate
- Be responsive to the needs of perinatally and behaviorally infected adolescents
- Be empowering (they must encourage adolescents to take responsibility for their own health)
- Emphasize both care **and** treatment; and emphasize retention in care, whether or not the adolescent is eligible for ART

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Overview of the Package of Care for ALHIV (Continued)

The importance of 1-stop shopping for adolescents

We can increase adolescent clients' ability to access and benefit from services by:

- Ensuring they are integrated, or at least co-located (**"1-stop shopping"**)
- Ensuring they are youth-friendly (see Module 2)

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Discussion Question

- *What is family-focused care?*

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Definition of Family-focused Care

- **Family-focused care** means that all members of the multidisciplinary care team think about the needs of all family members, and not just those of the client.
- It also means thinking about the linkages between the individual client, the client's family, and the community as a whole.

Remember: Adolescent's day-to-day lives include their families, partners, children, friends, and other community members, so ask about them at every visit!

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Discussion Question

- *What can we, as health workers, do to make our care "family-focused?"*

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The Importance of Family-focused Care

- **Make it routine practice to:**
  - Ask about caregivers and other family members.
  - Encourage clients to bring family to the clinic for services.
  - Provide ongoing information and support to family members.
- **With older adolescents:**
  - Enquire about partners and children.
  - Encourage and support clients to bring their partners to the clinic for information on HIV, safer sex, and HIV testing.

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Discussion Questions

- *Is anyone familiar with the "5 A's?"*
- *Why do you think the "5 A's" might be important in a clinical module?*

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Using the 5 "A's" in Consultations with Adolescent Clients

- The 5 "A's" are part of the WHO IMAI guidelines on working with clients (including adolescents) with chronic conditions.
- The 5 "A's" offer a framework for communicating both psychosocial and clinical information to clients.
- The 5 "A's" support the provision of information and support in a manner that is sensitive and client-centered.
- See Table 3.2.

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Using the 5 "A's" in Consultations with Adolescent Clients (Continued)

Use the 5 "A's" when providing clinical and psychosocial care and support

ASSESS	
More Information	**What the Health Worker Might Say**
▪ Assess client's goals for the visit ▪ Asses client's clinical status, classify/identify relevant treatments, and/or advise and counsel ▪ Assess risk factors ▪ Assess client's (caregiver's) knowledge, beliefs, concerns, and behaviors ▪ Assess client's understanding of the care and treatment plan ▪ Assess adherence to care and treatment ▪ Acknowledge and praise the client's efforts	▪ *What would you like to address today?* ▪ *What can you tell me about _____?* ▪ *Tell me about a typical day and how you deal with _____?* ▪ *Have you ever tried to _____? What was that like for you?* ▪ *To make sure we have the same understanding, can you tell me about your care and treatment plan in your own words?* ▪ *Many people have challenges taking their medicines regularly. How has this been for you?*

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Using the 5 "A's" in Consultations with Adolescent Clients (Continued)

ADVISE	
More Information	**What the Health Worker Might Say**
▪ Use neutral and non-judgemental language ▪ Correct any inaccurate knowledge and gaps in client's understanding ▪ Counsel on risk reduction ▪ Repeat any key information that is needed ▪ Reinforce what the client needs to know to manage his or her care and treatment	▪ *I have some information about ____ that I'd like to share with you.* ▪ *Let's talk about your risk related to ____. What do you think about reducing this risk by _____.* ▪ *What can I explain better?* ▪ *What questions do you have about _____?*

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Using the 5 "A's" in Consultations with Adolescent Clients (Continued)

AGREE	
More Information	**What the Health Worker Might Say**
▪ Negotiate WITH client about the care and treatment plan, including any changes ▪ Plan when the client will return	▪ *We have talked about a lot today, but I think we've agreed that _____. Is this correct?* ▪ *Let's talk about when you will return to the clinic for ____.*

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Using the 5 "A's" in Consultations with Adolescent Clients (Continued)

ASSIST	
More Information	**What the Health Worker Might Say**
▪ Provide take-away information on the plan, including any changes ▪ Provide psychosocial support, as needed ▪ Provide referrals, as needed ▪ Address obstacles ▪ Help client come up with solutions and strategies that work for him or her	▪ *Can you tell me more about any obstacles you've faced with _____ (for example, taking your medicines regularly, seeking support, practicing safer sex)?* ▪ *How do you think you can overcome this obstacle?* ▪ *What questions can I answer about _____?* ▪ *I want to make sure I explained things well — can you tell me in your own words about _____?*

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Using the 5 "A's" in Consultations with Adolescent Clients (Continued)

ARRANGE	
More Information	**What the Health Worker Might Say**
▪ Arrange a follow-up appointment ▪ Arrange for client's participation in a support group or group education sessions, etc. ▪ Record what happened during the visit	▪ *I would like to see you again in ____ for _____. It's important that you come for this visit or let us know if you need to reschedule.* ▪ *What day/time would work for you?*

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Comprehensive Care for ALHIV

- The care of the child with HIV is directed by pediatric guidelines.
- As the child ages and develops, his or her care transitions to follow adult HIV guidelines, with the care of adolescents often guided by pediatric guidelines, adult guidelines, or both.

- Although pediatric and adult guidelines have many similarities, their differences give health workers the flexibility to tailor the package of care to meet each adolescent client's needs.

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Clinical Assessment: Peer Teaching

- See Tables 3.3, 3.4, and 3.5 in your Participant Manual (these can also be used as job aides after the training).
  - Table 3.3 lists steps to be conducted when a client enrolls in the adolescent HIV program – it may take many visits to cover these steps.
  - Table 3.4 lists steps for follow-up visits for clients not yet on ART.
  - Table 3.5 lists steps for follow-up visits for clients on ART.
- We will now break into small groups to review these Tables.
- Small groups will have 20 minutes to prepare a 5-minute "teach-back" on their assigned Table.
- Please use engaging teaching methods and avoid lecturing!

Remember: Always follow your national guidelines.

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Key Points — Enrollment Visit

- Table 3.3 lists the steps to be conducted at the initial, or enrollment, visit (for entry into the adolescent program).
- As many adolescents with perinatally-acquired HIV have been in care for years, they will have undergone an enrollment assessment as infants or children.
- It may take several visits to complete all of the steps.
- Always follow your national guidelines.

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Key Points — Follow-up Visits

- See Tables 3.4 and 3.5 in your Participant Manual.
- **Key differences between enrollment and follow-up visits:**
  - During follow-up visits, history focuses on interim history (so, it is quicker)
  - During follow-up visits, health worker has access to history and laboratory tests, so there is more information for assessment and decision making
  - **For ALHIV not on ART:** focus is on routine exams and lab tests to ensure timely initiation of ART once eligible
  - **For ALHIV on ART**: focus is on adherence assessment, counseling, and support
- Always follow your national guidelines.

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Laboratory Monitoring

- Laboratory results can support the findings from the history and examination.
- Conduct laboratory tests at enrollment and as indicated in *Appendix 3A: Laboratory Monitoring Before, During, and After Initiating ART.*

Guiding Principles:

1. Laboratory monitoring is not a prerequisite for ART initiation.
2. CD4: although not required for initiating and monitoring ART, CD4 cell count is strongly recommended. Use of clinical criteria alone tends to under-diagnose eligibility for ART.

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Laboratory Monitoring (Continued)

Guiding Principles (continued):

3. Hemoglobin: desirable test at initiation of ART if AZT-containing regimen will be used
4. Viral load testing can be used to monitor ART and to diagnose treatment failure.
   - If resources permit, measure every 6 months with the objective of detecting failure earlier.
   - If resources are not available, use immunological and/or clinical criteria alone to define failure or prioritize the use of viral load testing to confirm suspected treatment failure. Always follow national guidelines.
5. Symptom-directed laboratory monitoring for safety and toxicity is recommended for those on ART.

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Laboratory Monitoring (Continued)

- **CD4 should be measured at the time of diagnosis AND:**
  - **For adolescents not yet eligible for ART**: monitor every 6 months and, as CD4 cell count approaches threshold for starting ART, every 3 months
  - **For adolescents on ART**: measure just prior to starting ART (if previous CD4 was measured more than 3 months ago) and at least every 6 months thereafter
  - **For all adolescents**: measure CD4 if a new clinical staging event develops, including growth faltering and neurodevelopmental delays

Remember: The unavailability of laboratory monitoring, should NOT prevent adolescents from receiving ART.

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Discussion Questions

- *When is cotrimoxazole (CTX) initiated in newly diagnosed adolescent clients?*
- *When would you discontinue CTX?*

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Cotrimoxazole (CTX)

- CTX is well-tolerated, cost-effective, and life-saving.
- CTX should be implemented as an integral component of chronic care for ALHIV who are symptomatic.

WHO criteria for initiating CTX:

- **Clinical criteria:** Start CTX when adolescent is symptomatic (WHO clinical stage 2, 3, or 4)
- **Immunologic criteria:** When CD4 testing is available, start CTX when CD4 count is <350, regardless of clinical stage
- Always follow your national guidelines.

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Cotrimoxazole (CTX) (Continued)

Discontinuing CTX:

- CTX can be discontinued if there is evidence of sustained immune recovery of CD4 >350 after at least 6 months of treatment
- **If there is no CD4:** can be discontinued if there is evidence of good clinical response to ART (absence of clinical symptoms after at least 1 year of therapy), good adherence, and access to ART
- Restart if CD4 falls below 350 or if there is a new or recurrent WHO clinical stage 2, 3, or 4 condition
- Always follow national guidelines when initiating and discontinuing CTX.

Discontinue CTX if there are drug-related adverse events, such as extensive exfoliative rash, Stevens-Johnson syndrome, severe anaemia, or pancytopaenia. **Remember, such adverse events are unusual.**

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Cotrimoxazole (CTX) (Continued)

- CTX is very well tolerated by the vast majority of clients and adverse reactions are rare.

Contraindications to CTX:

- Adolescents with history of severe and life-threatening adverse reactions — grade 3 and 4 to CTX or other sulfa drugs
  - Instead, give Dapsone 100mg/day
- Severe liver insufficiency
- Severe renal insufficiency
- See your national guidelines and WHO's CTX guidelines for additional information.

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Cotrimoxazole (CTX) (Continued)

- See Table 3.6 for CTX dosing.

Recommended once daily dose by age	**Susp-ension**	**Child tablet** (100mg/ 20mg)	**Single strength adult tablet** (400mg/ 80mg)	**Double strength adult tablet** (800mg/160mg)
10–14 years (or 15–30 kg) 400 mg sulfamethoxazole/ 80 mg trimethoprim	10 ml	4 tablets	1 tablet	½ tablet
>14 years (or >30 kg) 800 mg sulfamethoxazole/ 160 mg trimethoprim	N/A	N/A	2 tablets	1 tablet
CTX can be safely continued or initiated during pregnancy and breastfeeding.				

Source: WHO. (2006). *Guidelines on co-trimoxazole prophylaxis for HIV-related infections among children, adolescents and adults, Recommendations for a public health approach.* Geneva: WHO.

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Discussion Questions

- *What is human papillomavirus, or HPV?*
- *Is anyone familiar with HPV vaccination? How is it used?*

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HPV

- Genital human papillomavirus (HPV) is the most common STI.
- Most people infected with HPV do not know they have it.
- In most cases, the body's immune system clears HPV naturally within 2 years.
- However, some of the more than 40 types of HPV can cause genital warts or abnormal cells, which can lead to cervical and other cancers over time.

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Reducing HPV Risk Through Vaccination

- HPV is prevented in the same ways that HIV is prevented: through abstinence, being faithful, and consistent and correct condom use.
- Unlike HIV, however, HPV can also be prevented through vaccination.
- HPV vaccination can be initiated between the ages of 9–26 years, but is typically recommended at the age of 11 or 12.
- Vaccination requires a total of 3 shots over 6 months.
- A person gets the most benefit if all 3 doses are completed before initiating sexual activity.

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Discussion Questions

Now, we will spend some time talking about ART.

- *What are some benefits of ART that you have seen in your adolescent clients?*
- *What are the immunological and clinical criteria to start ART?*
- *What are some of the other issues that need to be considered before starting ART?*

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When to Start ART in ALHIV

- ART helps preserve and enhance the immune systems of PLHIV.
  - It reduces the risk of OIs.
  - It restores growth.
  - It improves mental functioning and overall quality of life.
- By adolescence, most clients with perinatally-acquired HIV will already be on CTX and many will be on ART.
- The decision to start ART relies on clinical and immunological criteria, as well as an assessment of other issues.

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Immunological and Clinical Criteria to Start ART

- **CD4 ≤350** OR
- **WHO stage 3 or 4** (regardless of CD4 count) OR
- **Active TB disease** OR
- **HIV/HBV-coinfection,** if HBV infection (chronic active hepatitis) requires treatment, irrespective of CD4 or WHO clinical stage OR
- For asymptomatic or mildly symptomatic ALHIV (stages 1 and 2), **when immunological values fall near threshold values**
  - Consider treatment in serodiscordant couples in stable, long-term relationships **if index partner has CD4 >350**

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Other Issues to Consider Before Initiating ART

- Before initiating ART, health workers should help ALHIV understand that they are starting lifelong therapy and prepare them (and caregivers) to adhere to their HIV care plan and ART regimen.
- **Adherence preparation should help the adolescent (and caregivers) to:**
  - Understand what HIV is
  - Understand what ART is and that it is a lifelong commitment
  - Understand how the ART is to be taken
  - Understand the challenges of adherence
  - Develop an individual adherence plan
  - Seek family and peer support for adherence

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Other Issues to Consider Before Initiating ART (Continued)

- Adherence preparation can take 1, 2, 3, or more visits, depending on a variety of factors
- At times, there may be more urgency to initiate ART quickly, especially with very sick children/adolescents. In these cases, minimize adherence preparation and increase post-ART initiation adherence support.
- There is more information on adherence preparation and support in Module 8.

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Prior to Initiating ART it is also Recommended That:

- Minimum enrollment laboratories have been completed (see *Appendix 3A* and always follow your national guidelines):
  - **Recommended:** CD4
  - **Desirable:** Hb if using AZT; ALT if using NVP; creatinine clearance if using TDF; pregnancy test for sexually adolescent females initiating EFV
- Other necessary laboratory tests have been conducted, based on history and physical exam
- CTX has been initiated
- The adolescent has been screened for TB
- The adolescent has been tested for Hepatitis B

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Prior to Initiating ART it is also Recommended That: (Continued)

- Adolescents with perinatally-acquired HIV know their HIV-status (i.e, have been disclosed to)
  - Keep in mind that this is a recommendation and **not a requirement to initiate ART.**
  - There may be times when the disclosure process cannot occur entirely before initiation.
- Adolescents who know their status have disclosed to someone they trust
  - Again, this is a recommendation and **should not be a requirement to initiate ART.**

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Discussion Questions

- *What is the 1st line ART regimen for younger adolescents?*
- *How does the 1st line ART regimen differ for older adolescents?*

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Introduction to ART Regimens

- **As a general rule, those who acquire HIV during their adolescent years are treated according to adult ART guidelines.**
- WHO recommends basing the choice of ART regimen and dosage for adolescents on their sexual maturity rating (see *Appendix 2A*).
  - Adolescents who are **Tanner stages I, II, and III** should be started on the pediatric schedule and monitored with particular care.
  - Adolescents who are **Tanner stages IV and V** are considered to be adults. The same recommendations and special considerations that apply to adults apply to these adolescents.

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First-Line ART Regimens: Younger Adolescents

See Table 3.7.

	Regimen	
	NRTI backbone	**NNRTI component**
Preferred 1st line	AZT + 3TC	NVP or EFV
Alternative 1st line[3]	ABC + 3TC	NVP or EFV
2nd Alternative 1st line[4]	d4T + 3TC	NVP or EFV
See important notes about these regimens in Table 3.7. Consult your national pediatric guidelines for more information on dosing. See *Appendix 3E: Preferred 2nd line ART Options.* Remember: Always follow your national guidelines.		

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First-Line ART Regimens: Younger Adolescents (Continued)

- Note that the 2010 WHO guidelines call for the **phasing out of d4T**-containing regimens for adults, unless AZT or ABC are contraindicated or not assured.
- **Dosing in younger adolescents is usually based on either weight or body surface area**
  - As these change with growth, drug doses must be adjusted at each visit to avoid the risk of under-dosing.
  - For additional information on dosing and regimens for specific scenarios, consult your national guidelines and WHO's *Antiretroviral Therapy for HIV Infection in Infants and Children: Towards Universal Access, Recommendations for a public health approach, 2010 revision.*

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First-Line ART Regimens: Older Adolescents and Adults

See Table 3.8.

	Regimen	
	NRTI backbone	**NNRTI component**
Preferred 1st line	AZT or TDF + 3TC or FTC	NVP or EFV
Pregnant women	AZT + 3TC	NVP or EFV
HIV/TB co-infection	AZT or TDF + 3TC or FTC	EFV
HIV/HBV co-infection	TDF + 3TC or FTC	NVP or EFV
See important notes about these regimens in Table 3.8. See *Appendix 3E: Preferred 2nd line ART Options* and *Appendix 3F: ARV Dosages for Older Adolescents and Adults.* Remember: Always follow your national guidelines.		

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Discussion Questions

- *What are the key signs that an adolescent is responding to ART?*
- *What are some of the possible events that health workers should look for during the initial 6 months that a client is on ART?*

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Possible Events During the First 6 Months on ART

- The first 6 months on ART are critical.
- Most adolescents respond well to ART initiation, with increases in CD4 cell count; however, some fail to respond as expected.

Key signs of an adolescent's response to ART include:

- Improvement in growth or weight gain in adolescents who have been failing to grow
- Decreased frequency of infections (bacterial infections, oral thrush, and/or other OIs)

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Possible Events During the First 6 Months (Continued)

- Complications in the first few weeks following ART initiation are most common in those with severe immunodeficiency.
- Apparent failure to improve does not necessarily reflect a poor response to ART.
  - It takes time for viral replication to be controlled by ART.
  - It may, however, reflect inadequate adherence.

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Possible Events During the First 6 Months (Continued)

Immune reconstitution inflammatory syndrome (IRIS):

- IRIS most often occurs in the first weeks to months after ART initiation.
- It is a complication caused by reactivation of the immune system.
- It can present as a flare-up of symptoms when the recovering immune system begins to respond to an existing infection (e.g., TB).
- It is NOT due to failure of ART, but rather its success (and the resulting immune reconstitution).

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Possible Events During the First 6 Months (Continued)

- When IRIS is suspected, consult a clinician experienced in managing ALHIV.
- Allow sufficient time (at least 6 months on ART) before judging the effectiveness of a regimen and considering a switch.
- Supporting adherence during this period is critical
- Persistent failure to see a CD4 response should alert you to potential adherence problems or non-response to ART.
  - In such cases, request a viral load (if available) and/or consult a clinician experienced in managing ALHIV.

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Supporting Adherence to Care and Treatment among ALHIV

- Adherence to both care and medicines are the cornerstones of successful HIV care.
- Adolescents often face unique challenges with adherence—challenges that are different from those of pediatric or adult clients.
- Adherence preparation, assessment, counseling, and support will be discussed in detail in Module 8.

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Discussion Questions

- *How often do adolescents on ART need to return to the clinic after starting ART?*
- *How often do adolescents not yet eligible for ART need to return to the clinic?*

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Frequency of Clinical Monitoring

- Always follow national guidelines.
- **Adolescents on ART**: depends on response to ART and national guidelines
  - After starting ART, **follow-up visits should occur at a minimum at weeks 2, 4, 8, 12, and then every 3 months** (once stabilized on ART)
- **Adolescents not yet eligible for ART**: Follow-up visits should occur:
  - Every 3 months if CD4 count is between 350–500
  - Every 3–6 months if CD4 cell count is greater than 500
  - More frequently, as needed

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Toxicities

- **Toxicity can be:**
  - Can be monitored clinically, based on client report and physical examination
  - Can be assessed by a limited number of laboratory tests
- **3 categories of drug toxicities:**
  - **Mild toxicities** do not require discontinuation of ART or drug substitution; give symptomatic treatment
  - **Moderate or severe toxicities** may require drug substitution, but do not require discontinuation of all ART
  - **Severe life-threatening toxicities** require discontinuation of all ARVs and initiation of supportive therapy until the patient is stabilized and and the toxicity is resolved

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Toxicities (Continued)

- For additional information on toxicities, refer to national guidelines, WHO recommendations, or a local HIV specialist.
- **Regardless of severity, adverse reactions may affect adherence.** Take a proactive approach:
  - Before initiating ART, discuss potential side effects.
  - During the early stages of treatment, offer support during minor and moderate adverse reactions.
- **Remember:** Many ARV drug toxicities are time-limited and resolve spontaneously, even when the same ART regimen is continued.

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Discussion Questions

- *What is the definition of treatment failure?*
- *What are the 5 things that need to be verified before concluding that treatment has failed?*
- *How is suspected treatment failure confirmed?*

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Treatment Failure

- **Treatment failure is when ART stops controlling an individual's virus and he or she starts getting sicker.**
- It needs to be confirmed in a timely manner:
  - If diagnosed prematurely, clients are often switched to expensive 2nd line ART regimens unnecessarily.
  - If diagnosed late, the result could be disease progression or even death.

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Treatment Failure (Continued)

When treatment failure is suspected, verify these 5 things:

- The adolescent has been on ART for at least 24 weeks
- The adolescent has been adherent. If not, keep ALHIV on same regimen and provide adherence counseling and support.
- Any inter-current infection or major clinical event has been treated and resolved.
- IRIS has been excluded.
- The adolescent is receiving adequate nutrition (if considering a change in treatment because of growth failure).

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Treatment Failure (Continued)

- **There are 3 criteria for treatment failure** (see Table 3.9):
  - Clinical
  - Immunologic
  - Virologic
- Virological failure is the most accurate method. If not available, use immunological criteria (i.e. CD4 cell count)
- Once treatment failure has been detected, select a new regimen using national guidelines (see *Appendix 3E: Preferred 2nd line ART Options).*
- Switch client to a new regimen within 1 month of confirming treatment failure.

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Treatment Failure (Continued)

Whenever an adolescent client is switched to a new regimen:

- Counsel him or her on reasons for the change in regimen, differences in drug types, dosages, and timing of administration.
- Review possible side effects of the new regimen.
- Re-assess for social issues that could negatively influence adherence and review the importance of adherence.
- Provide ongoing adherence counseling and support (see Module 8).

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Discussion Questions

- *Why do you think it is important to discuss TB as part of this training?*
- *How often should you screen ALHIV for TB?*
- *How should you screen ALHIV for TB?*

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Tuberculosis - Background

- PLHIV, including ALHIV, are at risk for developing TB, regardless of their CD4 count.
- HIV is the strongest risk factor for TB.
- Co-infection with HIV/TB is a major public health threat.
- TB is responsible for more than 25% of all deaths among PLHIV.
- TB threatens the significant health benefits achieved with the scale-up of HIV care and treatment.

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Tuberculosis Screening

All ALHIV should be screened for active TB at each visit:

- **See Figure 3.1 for TB screening algorithm**
- If found to be co-infected, they should be started on anti-TB medicines immediately.
  - If they are not already on ART, they should start ART soon thereafter.
- All ALHIV who do not have signs of signs of active TB should be offered isoniazid preventive therapy (IPT) for at least 6 months.
- ALHIV who have had a significant TB contact should be screened for TB. If there is no active TB, give IPT for 6 months.
- PLHIV who have been treated for TB can benefit from IPT and should be offered secondary prophylaxis after completing TB tx.

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Tuberculosis Screening (Continued)

- **All ALHIV should be evaluated for contact with a TB source case and for current TB symptoms at every clinic visit.**
  - Regardless of immunologic status, treatment status, or whether currently receiving Isoniazid (INH)
- **Screen for contact with a TB source by asking if the client:**
  - Has had close contact with someone diagnosed with TB
  - Has had close contact with someone who has a chronic cough, fever, or who has lost a lot of weight
- If client has had contact with a TB source, exclude active TB disease per national guidelines and, if there is no evidence of active TB, offer IPT.

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Tuberculosis Screening (Continued)

To screen younger adolescents for TB, ask about:

- Current cough
- Fever
- Weight loss or poor weight gain

To screen older adolescents for TB, ask about:

- Current cough
- Fever
- Night sweats
- Weight loss

- If the client has **none of the above symptoms,** active TB disease is unlikely; offer IPT
- If client has **1 or more symptoms**, evaluate for active TB disease.
- See *Appendix 3G* and *3H* for sample TB screening tools.

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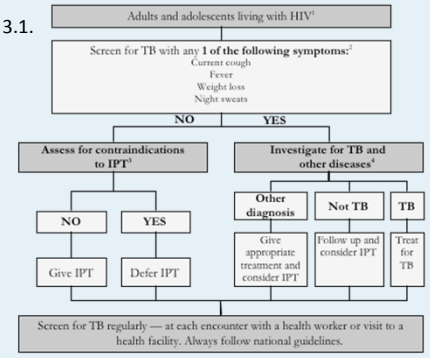
Tuberculosis Screening (Continued)

- See Figure 3.1.



82

Discussion Questions

- *Who should receive isoniazid preventive therapy (IPT)?*
- *What is the isoniazid (INH) dosing for adolescents?*

83

Prevention of Tuberculosis with IPT

- **IPT is part of the WHO's "3 I's" strategy to improve TB case finding and prevent TB:**
  - Isoniazid preventive therapy (IPT)
  - Intensified case finding for active TB
  - TB infection control

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Prevention of Tuberculosis with IPT
(Continued)

- **The following should receive IPT:**
  - **All ALHIV with no evidence of active TB disease and no contraindications to IPT**
  - **ALHIV who do not have any TB symptoms** (should be offered IPT for at least 6 months)
  - **ALHIV who have been successfully treated for TB disease** (should be offered IPT for 6 months, unless MDR or XDR TB)
  - **ALHIV who have had contact with a TB case and do not have active TB disease** (should be offered IPT for 6 months)

85

Prevention of Tuberculosis with IPT
(Continued)

- The recommended dose of isoniazid (INH) for preventive therapy in HIV co-infection among most adolescents is **1 adult tablet (300mg) or 3 100mg tablets daily** (if pill size or formulation is limited).
- Also give 25mg daily of vitamin B6.
- See Table 3.10, which includes simplified dosing for adolescents weighing <25 kg.

86

Treatment Considerations in Adolescents with TB and HIV

- Prompt treatment is important!
- ALHIV with active TB disease should begin TB treatment immediately and should start ART, regardless of CD4 cell count, as soon as possible — within 2-8 weeks.
- Co-management of TB and HIV is complicated by drug interactions, particularly between rifampicin and the PI classes of ARVs.
  - EFV is the preferred NNRTI in patients starting ART while on TB treatment.

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Treatment Considerations in Adolescents with TB and HIV (Continued)

- Ensure all household contacts and anyone else with whom the client has had regular contact is referred for screening and, if needed, treatment.
- Always follow your national TB/HIV guidelines.
- See WHO guidelines for more information on the treatment of TB and HIV.
- Refer back to Tables 3.7 and 3.8 for recommended ART regimens for adolescents with TB/HIV co-infection.

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Adherence Support

- Provide ALHIV and caregivers with adherence counseling and monitoring at every clinic visit.
- Adherence support for IPT or anti-TB therapy can be included in the ART adherence discussion.

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ART Switching for ALHIV Who Develop TB While on 1st Line ART

- ART should continue in ALHIV already on 1st line regimen who are subsequently diagnosed with TB
- The ART regimen should be reviewed and may need adjustment:
  - To ensure optimal treatment of both TB and HIV
  - To decrease the potential for toxicities and drug-drug interactions
- In ALHIV on a standard NNRTI-based 1st line regimen who develop TB, make these adjustments:
  - If on a regimen of 2 NRTI + NVP, switch NVP with EFV
  - If on a PI regimen, consult an expert for guidance

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ART Switching for ALHIV Who Develop TB While on 1st Line ART (Continued)

- Where TB is being considered as a sign of treatment failure of the 1st line regimen, consider switching to a 2nd line regimen if:
  - The adolescent has taken ART for more than 24 weeks;
  - Has initially responded to it; and
  - Has not responded to anti-TB treatment

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Discussion Questions

- *What are some of the signs and symptoms of neurocognitive and developmental disorders?*
- *What can health workers do to support clients with neurocognitive and developmental disorders and their families?*

92

Neurocognitive and Developmental Disorders

- HIV in children, particularly those infected perinatally, is associated with developmental delays and cognitive impairments.
- Cognitive impairments can include language, motor, and behavioral impairments.
- Some children and adolescents living with HIV have normal development, some have mild impairment, and others have severe impairment.
- Factors that affect the degree of impairment include the timing of HIV infection and the use of ART.

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Neurocognitive and Developmental Disorders (Continued)

Assessment of neurocognitive and developmental status should be routinely incorporated into the care of all children and adolescents with HIV.

- **Signs and symptoms of neurocognitive and developmental disorders:**
  - Slowed psychomotor speed
  - Delayed expressive language skills
  - Memory deficits
  - Poor attention
  - Developmental impairment
  - Difficulty learning social behaviors and/or self-care

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Neurocognitive and Developmental Disorders (Continued)

Management and treatment for neurocognitive and developmental disorders:

- Provide client and family tailored supportive counseling
- Encourage caregivers to follow this general principle: reward effort, not results
- Ensure that the adolescent is on an adequate ART regimen to prevent or slow further progression
- Refer the client for neuropsychological testing
- Link client to specialized care and community-based resources
- Provide the caregivers of older, stronger adolescents who are severely impaired with assistance and support

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Exercise 1

The Adolescent Package of Care: Case studies in small groups and large group discussion

96

Exercise 1

In small groups, discuss and record key points on flip chart for your assigned case study:

- **Assess**: Key points inferred from the assessment
- **Advise**: How the client should be advised
- **Agree**: Key points that should be negotiated with the client
- **Assist**: How the client should be assisted
- **Arrange**: What services or follow-up appointments need to be arranged, and what should be recorded in the notes.

Refer back to Table 3.2 to guide your case study discussions.

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Exercise 1: Case Study 1

K___ recently tested HIV-positive at the district hospital. Today is her 1st visit to your clinic. Although she is 14 years old, you think that she acquired HIV through MTCT because she has never had sex and has no history of abuse. The fact that K___'s mother died of a disease described as TB when she was 16 months old has further supported your suspicion. Although she is relatively healthy, you notice that she takes longer than most 14-year-olds to understand what you are saying, she becomes impatient quickly with the clinic processes, and her auntie (her primary caregiver) complains that she doesn't do well in school and has difficulty concentrating. You can't help but notice that she looks more like a 10-year-old than a 14-year-old.

→ *How do you proceed with K___?*

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Exercise 1: Case Study 2

S___ is 17 years old and was diagnosed with HIV at the STI clinic about 2 months ago. This is her 2nd visit to the HIV clinic. After being screened for TB at her enrollment visit 1 month ago, she was started on both IPT and CTX. You just received her lab work and her CD4 cell count is 325 (even though she is clinical stage 2) and her Hb is 12 g/dl.

→ *How do you proceed with S___?*

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Exercise 1: Case Study 3

T___ is 17 years old and was diagnosed with HIV 1 year ago. T___ is quite healthy; at her last visit, her CD4 cell count was 500 and she was a clinical stage 1. The only reason she was tested last year was because she had heard through a friend that her old boyfriend was rumored to have HIV. Today, however, T___ looks thin and tired — much different from the way she looked the last time you saw her just 6 months ago. When she comes into the exam room, you realize that she has also been coughing.

→ *How do you proceed with T___?*

100

Exercise 1: Case Study 4

A___ is 13 years old and acquired HIV perinatally. He is at the clinic today for his routine appointment. A___ has been on AZT + 3TC + EFV since he was 5 years old. He remains on this same regimen and was just discharged from the inpatient unit with bacterial pneumonia. When you examine A___ today, you realize that he has lost 4 kg since his last visit. His CD4 cell count is currently 350, when previously it was over 500.

→ *How do you proceed with A___?*

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Exercise 1: Debriefing

- *What did we learn?*
- **Key points:**
  - It is important to conduct a thorough clinical assessment focusing on clinical, laboratory, social, developmental, growth, and emotional factors each time an ALHIV visits the clinic.
  - It is always important to stay up-to-date on and follow national guidelines.
  - HIV-related care must be family centered.
  - Ensure that the care provided to a client is multidisciplinary.

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Questions or comments on this session?

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Module 3: Key Points

- Some ALHIV will have acquired HIV perinatally, while others will have acquired HIV later in childhood or adolescence. Although their histories, experiences, and needs may differ significantly, there are also many similarities between these groups.
- HIV programs for adolescents should include a broad package of services and support, including much more than just the provision of ART.
- Adolescent services should be age- and developmentally-appropriate and should be responsive to the needs of both perinatally and behaviorally infected clients.
- Providing "1-stop shopping," youth-friendly services, and family-focused care will better help meet the needs of adolescent clients.

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Module 3: Key Points (Continued)

- Health workers can use the 5 "A's" when providing clinical and psychosocial care and support to adolescent clients.
- Always refer to national guidelines and training packages for specific details and guidance.
- The clinical assessment for a client with HIV needs to be thorough and should focus on clinical, laboratory, psychosocial, nutrition, and social parameters. It is also important to routinely assess clients' developmental and neurocognitive status.
- Where available, CD4 cell count should be measured at time of diagnosis and at least every 6 months thereafter, regardless of whether the ALHIV is on ART or not.

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Module 3: Key Points (Continued)

- The unavailability of laboratory monitoring should NOT prevent adolescents from receiving ART.
- Initiate CTX when CD4 count is <350cells/mm^3, regardless of clinical stage, or, if CD4 count is unavailable, start when adolescent is in clinical stage 2, 3, or 4.
- The decision to initiate ART is based on immunological and clinical criteria (CD4 ≤350 or WHO stage 3 or 4) and is also informed by other considerations, such as laboratory results, opportunistic infection screening, and adherence readiness.
- Health workers should be aware of and look out for possible events after ART initiation. It is important to allow at least 6 months before judging a regimen's effectiveness.

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Module 3: Key Points (Continued)

- After starting ART, clinical monitoring visits should occur at minimum at weeks 2, 4, 8, and 12, and then every 3 months. ALHIV not eligible for ART should visit the clinic every 3-6 months.
- Treatment failure is when ART stops controlling an individual's virus and he or she starts getting sicker. There are 3 criteria for treatment failure: clinical, immunologic, and virologic.
- All ALHIV should be screened for active TB, contact with a TB source case, and current TB symptoms at every visit.
- All ALHIV with no evidence of active TB disease and no contraindications to IPT should begin IPT. ALHIV with active TB disease should begin TB treatment immediately and should start ART as soon as possible. Always follow national TB guidelines.

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