Module 1
Course Introduction

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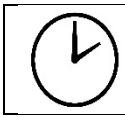
Module 1, Part 1: Trainer Guide



Total Module Time: 145 minutes (2 hours, 25 minutes)

Overview for the Trainer

Session 1.1: Welcome and Introductory Activity

Activity/Method	Time
Welcome	10 minutes
Exercise 1: Getting to know each other	30 minutes
Questions and answers	5 minutes
Total Session Time	45 minutes

Session 1.2: Training Objectives, Agenda, and Ground Rules

Activity/Method	Time
Interactive trainer presentation and large group discussion	10 minutes
Exercise 2: Setting ground rules and introducing daily activities	20 minutes
Questions and answers	5 minutes
Total Session Time	35 minutes

Session 1.3: Training Pre-Test

Activity/Method	Time
Pre-test	20 minutes
Questions and answers	5 minutes
Total Session Time	25 minutes

Session 1.4: Paediatric HIV Overview: Global Progress and Goals

Activity/Method	Time
Interactive trainer presentation and large group discussion	15 minutes
Exercise 3: Large group discussion about HIV in infants and children	15 minutes
Questions and answers	5 minutes
Review of key points	5 minutes
Total Session Time	40 minutes

Materials Needed	
	• Slide set for Module 1 • Flip chart and markers • Tape or Bostik (adhesive putty) • Name tags • Registration sheet • Bowl to be used as *"Anonymous Question Bowl"* • 1 large envelope to collect "*How Did it Go?"* papers • Participant Manuals, 1 copy for each participant • Notebooks, 1 for each participant • Pens, 1 for each participant

Special Instructions	
	• Review and edit the Sample Training Agenda (Appendix 1A). Adapt the sample agenda to include training location and dates and to ensure it meets participant training needs. • Each participant should receive a Training Agenda and Participant Manual. • Where protocol dictates, invite a guest speaker to open the training. The guest speaker may also be invited to present Session 1.4. If a guest speaker will present, meet with this person before the training to brief him or her about the workshop—including the goals, objectives, and participant expectations—as well as the amount of time available for presentation. • Research national and local HIV-related, paediatric epidemiological statistics. Relevant national data include paediatric HIV prevalence, coverage of early infant diagnosis, turn-around time for infant virologic testing, and pediatric ART coverage. Prepare no more than 5–8 slides summarizing the national/local context and add them to the slide set for Session 1.4.

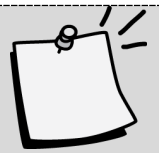
Session 1.1: Welcome and Introductory Activity

Total Session Time: 45 minutes

Session Objectives

During this session, participants will:

- Introduce themselves and be introduced to the trainer(s)
- Discuss expectations for the training



Trainer Instructions

Slides 1–4

Step 1: **Introductions and welcome**

Introduce yourself and the other trainers and give a brief overview of your professional background. Welcome participants to the training. Let each participant introduce themselves to the group.

Step 2: **"Housekeeping"**

Before starting, take care of the following "housekeeping" details:
Point out the location of the toilets, emergency exits, security, parking, per diem payments (if applicable), etc.

Step 3: **Introduce Participant Manual**

Explain that the Participant Manual includes all key information that will be discussed during the training, as well as guidance on the training exercises. Participants will be expected to follow along in their manuals and to take notes during the training. Also, encourage participants to use their manuals as reference material once the training has ended.

Step 4: **Exercise 1**

Conduct Exercise 1 (see below).

Make This Point

We will be together for the duration of the training, so start the training with an exercise that gives us an opportunity to get to know each other better. The more comfortable participants feel with each other and with the trainers, the more they will get out of this training.

Step 5: Allow 5 minutes for questions and answers on this session.

Exercise 1

Exercise 1: Getting to know each other: Large group discussion and individual reflection	
Purpose	• To provide an opportunity to get to know one another better • To create a comfortable learning environment • To discuss participants' personal and professional strengths, their concerns about infant testing, and their expectations for the training
Duration	30 minutes
Advance Preparation	You will need the following materials for this exercise: • Flipchart and markers
Introduction	This is an activity that will help us get to know each another better. It will also give us a chance to talk about our strengths, our concerns, and our expectations for the training.
Activities	**Introductions** 1. Ask participants to take 1 minute to state their: • Name • Place of employment (or other relevant introductory question, such as job title) • Number of years of professional experience • Their favourite aspect of working with parents and infants or what they're excited about learning from this training **Individual reflection** 2. Ask participants to think about the following questions [can project questions – see Slide 4] and to write their responses on the paper. • **Strengths:** *What is 1 personal strength that helps you—or will help you—work effectively with parents and their HIV-exposed infants?* • **Concerns:** *What concerns or worries do you have about providing care to parents and HIV-exposed infants?* • **Expectations:** *What do you hope to learn during this training course?* 3. While participants complete their answers, write each of the words, **"CONCERNS," "EXPECTATIONS,"** and **"STRENGTHS"** on separate pieces of flip chart and tape them to the wall where everyone can see them. **Large group discussion** 4. Start the discussion by asking the group what **strengths** they each bring to their work with parents and HIV-exposed infants; take notes on the prepared flip chart pages. Give examples such as "experience" or "sense of humour" to get the discussion started. Discuss participants' strengths in the context of providing care and treatment to HIV-infected mothers and their babies. Encourage them to value these strengths. Stress that, although healthcare providers often do not get enough recognition, the work they do is extremely important.

	5. Then ask participants what **concerns** (or worries or fears) they have about providing care to parents and HIV-exposed infants. Note that you are not referring to general concerns they may have about families affected by HIV, but rather concerns that they have specifically about providing care and treatment to parents and their HIV-exposed infants. If it helps, give an example of a concern that you have had—"*When I first started working with HIV-exposed babies, I was worried about having to give an HIV-positive result to a parent."* Allow for some discussion while writing down each of the concerns mentioned by participants. 6. Ask participants what they hope to learn from the training—their **expectations.** Explain that, although the training has many objectives, it is important that the facilitators find out what particular issues participants want to learn more about. Write these on the flip chart. Tell the group that you will keep their expectations visible throughout the training and try to make sure they are met (if possible). 7. Leave the completed strengths, concerns, and expectations flip chart sheets posted on the wall. The lists will be discussed again on the last day of the training, however trainers should refer to them as various expectations are met, as different strengths come up in discussion, etc. 8. Ask participants to save their strengths, concerns, and expectations papers because they will need to refer to them during Module 6 on the last day of training. Suggest that they put them in-between the pages of their Participant Manuals, somewhere in Module 6.

Adapted from: ICAP. Module 1: Introduction and Course Overview. Adolescent HIV Care and Treatment: A Training Curriculum for Health Workers, Trainer Manual (1)

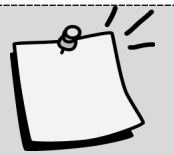
Session 1.2: Training Objectives, Agenda, and Ground Rules

Total Session Time: 35 minutes

Session Objectives

During this session, participants will:

- Gain an understanding of the training objectives
- Review the training agenda
- Establish training "ground rules"



Trainer Instructions

Slides 5–8

Step 1: **Course learning objectives**

Review the learning objectives for this course with participants (Appendix 1B).

Step 2: **Core competencies**

Provide an overview of the core competencies that participants are expected to have achieved by the end of the course. There are approximately 24 competencies that each participant will be expected to master by the end of this course.

Ask participants to turn to *Appendix 6A: Practicum Checklist* in Module 6 of their Participant Manuals. Give them 3–5 minutes to read through the competencies and recommend that they review them more closely on their own after the training day has ended.

Make These Points

- Learning objectives focus on understanding key concepts and gaining knowledge.
- Core competencies are skills that participants are expected to master by the end of the training. Participants will practice these skills during the practicum.
- Participants should reference the Infant HIV Testing Training Objectives (Appendix 1B) and core competencies in the Practicum Checklist (Appendix 6A) throughout the course to assess progress toward meeting objectives and competencies.

Step 3: **Agenda**

Distribute the Training Agenda. Take 5 minutes to review the agenda together and ensure that participants understand the duration of the training and daily start and completion times.

- Discuss how the clinical practicum will be conducted.
- Review any logistics, including daily start times, end times, and breaks, as well as arrangements for any per diem, meals, etc.

Make These Points

The training course is a 5-day curriculum, consisting of 6 modules that take about 3.5 days to teach and a 1.5 day practicum. Each module is divided into a number of sessions, each with its own learning objectives. The clinic-based practicum provides participants with the opportunity to practise the skills learned in the classroom. The six modules are:

- Module 1: Course Introduction
- Module 2: Testing of HIV-exposed Infants
- Module 3: Comprehensive Care for HIV-exposed Infants
- Module 4: Pre-test Information and DBS Collection for Infant Virological Testing
- Module 5: Post-test Counselling for Infant HIV Testing
- Module 6: Course Summary, Practicum and Wrap Up

Step 4: **Exercise 2**

Facilitate Exercise 2 (see below) to set ground rules for the course and to introduce the daily activities.

Step 5: Allow 5 minutes for questions and answers on this session and be sure to answer any questions participants have about logistics.

Exercise 2

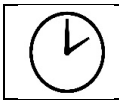
Exercise 2: Setting ground rules and introducing daily activities: Large group discussion	
Purpose	• To develop and agree on a set of rules that will create an environment that facilitates learning • To introduce the *"Anonymous Question Bowl"* as a safe space for asking questions • To introduce the "*Morning Rounds"* as a way to start each day of the training

	• To introduce the *"How Did it Go"* daily evaluation activity as a way of giving feedback to the trainers so they can make adjustments DURING the training course
Duration	20 minutes
Advance Preparation	• Find a large envelope or bowl that can be used as the *"Anonymous Question Bowl"* • Get 1 large envelope and label it "*How Did it Go*?" for the daily evaluation activity
Introduction	We want to learn about the care and testing of HIV-exposed infants, but we also want to create a safe space for learning. To do that, we need to agree on some ground rules before starting the training.
Activities	**Develop and agree on ground rules** 1. Ask participants what rules would help make them feel comfortable speaking up during group discussions. 2. If the group is slow to offer suggestions, consider giving the following examples: • Be respectful of others, including in what we say, our posture, and our tone of voice. • Listen to and respect all opinions. • Actively participate to get the most out of this training and take every opportunity to practise new skills. • Speak one at a time and avoid having side conversations. • Turn off mobile phones during all training sessions. • Do not text/SMS during the training. • Be in your seat on time in the morning and after breaks. We recognize the trainer's responsibility to keep time; in order to do this, s/he will need to moderate discussions and in some cases cut discussions short, particularly if off-topic. • Honour confidentiality. Personal stories will stay in this room. • Have fun! This training is an opportunity to learn new skills, share ideas, and meet new people in a comfortable setting. 3. Write the ground rules suggested by participants on a flip chart. 4. Be sure to include a rule related to confidentiality ("What is said here, stays here") and a rule related to turning off mobile phones during training sessions (participants will have time during breaks and lunch to make/receive calls). 5. Post the ground rules on the wall when the group has finished. **Introduce the *"Anonymous Question Bowl"*** 6. Tell participants about the *"Anonymous Question Bowl,"* showing them where it is and inviting them to submit questions at any time, about any topic addressed during the training. 7. Explain that their questions may include concerns about themselves, their families, co-workers, or patients. Tell them that the *"Anonymous*

	Question Bowl" will be checked daily and that all questions will be answered. 8. Trainers should review all questions in the *"Anonymous Question Bowl"* after the end of each training day and provide answers to the questions the next morning. Technical questions can be read to the group and answered, but trainers should make sure the questioner remains anonymous. 9. Additional information on the *"Anonymous Question Bowl"* can be found in "Managing Training Sessions: Tips for the Trainer" starting on page 16 in the Introduction to the Training Manual. **Introduce the "*Morning Rounds*"** 10. Tell participants that, each morning of the training, they will meet in the classroom for "*Morning Rounds*." This will be a time to check in with each other, to recap and answer any questions from the previous day, and to review the agenda for that day. Morning Rounds are also discussed in "Managing Training Sessions: Tips for the Trainer". **Introduce the daily evaluation – *"How Did it Go?"*** 11. Tell participants that, at the end of each training day, the group will debrief using a daily evaluation activity called "*How Did it Go?*" This is a very quick (1–2 minutes), 2 question feedback exercise. 12. Each participant will be given 1 sheet of paper. On 1 side of the paper, they should draw a smiley face (☺) and write 1 thing that was good about the day. On the other side of the paper, they should draw a sad face (☹) and write 1 thing they did not like about the day or would like to see improved. 13. Participants should not put their names on the sheets of paper. 14. Before they leave the training each day, participants should put their paper in the envelope labelled *"How did it go?"* The trainers should then review participants' comments and suggestions from that day and use the feedback to make improvements during subsequent days.
Debriefing	• Remind participants that a comfortable and open environment will facilitate the group learning experience. • Encourage participants to speak to one of the trainers if they have any questions or concerns.

Adapted from: ICAP. Module 1: Introduction and Course Overview. Adolescent HIV Care and Treatment: A Training Curriculum for Health Workers, Trainer Manual (1)

Session 1.3: Training Pre-Test

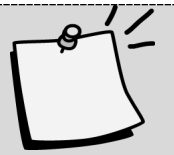


Total Session Time: 25 minutes

Session Objective

During this session, participants will:

- Complete the training pre-test



Trainer Instructions

Slide 9

Step 1: **Explain objective of the pre-test**

Explain to participants that they will now be taking the training pre-test. The objective of the pre-test is to find out what the group as a whole knows about HIV-exposed infant HIV care and testing. The group's results on the pre-test will be an indication for the trainer of the group's learning needs and will guide the amount of time spent on specific modules.

Participants will take this same test again at the end of the training, at which point it will be called the post-test.

Step 2: **Distribute the pre-test**

Distribute the pre-test. (Note: participants have only 1 copy of the test, which they can use as the pre-test. Make copies of the same test—the pre- and post-test are the same—and use for the post-test on the last day of training.)

Step 3: **Participants take pre-test**

Give participants about 20 minutes to complete the questions. Once they have finished, ask them to hand their completed pre-test to a trainer. Explain that the pre-tests will be scored and then, at the end of the training, compared to the post-test scores. This will give trainers a sense of how much participants learned during the training and will help them identify areas where the training needs to be improved in future.

Step 4: **Explain when answers will be provided**

After the pre-test, explain that the trainers will review the test answers after participants have completed the post-test on the last day of the training.

Step 5: Allow 5 minutes for questions and answers on this session.

Step 6: **Note to trainers**

Once the training has been completed for the day, trainers should:

- Score the pre-tests using Appendix 1C: Pre-Post Test Answer Key in the Trainer Manual.
- For each of the 20 questions, calculate how many participants got the answer incorrect. Note which questions were answered incorrectly most often and ensure these points are emphasized in the training.

Session 1.4: Paediatric HIV Overview: Global Progress and Goals

Total Session Time: 30 minutes

Session Objectives

After completing this session, participants will be able to:

- Discuss the status of HIV infections in children
- Discuss approaches and programmatic interventions to reduce mother-to-child HIV transmission
- Discuss approaches and programmatic interventions to ensure that children who are HIV-infected are rapidly identified and initiated on antiretroviral therapy (ART)

Trainer Instructions

Slides 10–17

Step 1: **Session objective**
Review the session objectives listed above.

Step 2: **Children and HIV: Where We Are Now**
Using the slide set and any additional slides added by the trainer on local/national context, discuss the current situation with respect to HIV infection in children.

Step 3: **HIV Epidemic Today**
Present content on the state of the HIV epidemic using the slide set and course content in Part 2 of this module.

Step 4: **Global Progress in Reducing HIV Infection in Children**
Provide an overview of global progress in reducing paediatric HIV infections. Emphasize the importance of infant HIV testing services in saving lives.

Make These Points

- Although the number of infants and children diagnosed with HIV annually has dropped, we still fall short of reaching targets related to elimination of mother to child HIV transmission (eMTCT), coverage of infant HIV testing and linkage of HIV-infected infants to ART.

	• The implementation of global PMTCT services has been successful in dramatically reducing the number of infants infected with HIV each year. • However, there is still more work to do. Any infant with HIV who is not on ART has a 50% chance of dying before his/her 2nd birthday, with very high mortality before 6 months of age. It is vitally important that all HIV-exposed infants are tested early for HIV, followed in care with regular testing until the end of the breastfeeding period and, if found to have HIV, immediately provided with care and treatment, including ART.
Step 5:	Facilitate Exercise 3 (see below).

Exercise 3

Exercise 3: Large group discussion about HIV in infants and children	
Purpose	• To brainstorm potential solutions to challenges in paediatric HIV programmes
Duration	15 minutes
Advance Preparation	You will need the following materials for this exercise: • Flipchart and markers
Introduction	This is an activity that will allow us to brainstorm ways that we can more effectively prevent and treat HIV in children. I will ask some questions and ask you to offer suggestions. There are no right or wrong answers. I will write your suggestions on the flipchart. This is a large group discussion: please be respectful of others when they are speaking.
Activities	**Question 1:** New HIV infections in children have decreased in recent years, but the number of new paediatric HIV infections (160,000 in 2018) is still higher than we want it to be. (2) What do you think needs to be done to reduce the number of children infected with HIV? **Give participants time to respond and discuss**. *Answer:* Answers may vary, but ensure discussion includes: – The importance of PMTCT services for pregnant and breastfeeding women, specifically ensuring that all HIV+ women are on ART – Retention in care through the breastfeeding period – Monitoring ART adherence and viral suppression in the mother Community engagement and improved service delivery to bring in and retain women in care – ARV prophylaxis for infants

	Question 2: In 2018, 100,000 infants and children (age 0–14 years) died of HIV globally (3). What do you think needs to be done to lower the infant and child death rate from HIV? *Answer:* Answers may vary, but ensure discussion includes: – The importance of identifying all infants at risk/HIV-exposed – The provision of early and repeat testing for all at risk infants – Newly identified HIV-infected infants should be provided with ART as soon as possible. – Adherence support, retention monitoring, and patient tracking for infants/children on ART and their families

Trainer Instructions

Slides 18–19

Step 6: **Module key points**
Ask participants what they think the key points of the module are. What information will they take away from this module?

Step 7: Summarize the key points of the module, using participant feedback and the content below.

Module 1: Key Points

- This module provided an opportunity for participants to articulate their strengths, concerns about providing testing and care to HIV-exposed infants, and expectations of this training.
- Participants should now have a clear idea of what to expect from the training and hopefully are getting to know their fellow trainees.
- In order to meet development goals and improve the lives of children, it is critical that countries strengthen PMTCT programmes, improve the coverage of infant HIV testing services, support comprehensive care for HIV-exposed infants, and ensure that infants diagnosed with HIV are provided with the HIV-related treatment that they need, including ART.

Module 1, Part 2: Course Content

Session 1.4 Course Content: Paediatric HIV Overview: Global Progress and Goals

Children and HIV: Where We Are Now

Despite the fact that new diagnoses in infants and children under the age of 15 years have fallen dramatically with the scale up of PMTCT services, infants and children are still becoming HIV-infected. In 2018:

- 160,000 children age 0–14 years (down from 423,000 in 2000) became infected with HIV
- 1.7 million children were living with HIV (2)
- 100,000 children died of HIV-related causes (3)

HIV Epidemic Today

Since the beginning of the epidemic to the end of 2018, about 74.9 million people have been infected with HIV and about 32 million people have died of HIV. As of the end of 2018:

- 37.9 million adults were living with HIV
- In 2018 alone, about 770,000 people died of an AIDS-related illness (2)

Sub-Saharan Africa remains most severely affected, with nearly 1 in every 25 adults (4.2%) living with HIV and accounting for nearly two-thirds of the people living with HIV worldwide (4).

Sustainable Development Goals

The Millennium Development Goals (MDGs) expired in September 2015 and were replaced by a Post-2015 Development Framework that included the new Sustainable Development Goals (SDGs).

In this framework, the HIV/AIDS, TB, malaria and other related child- and adult-health goals were replaced by one overarching health goal: Goal 3—Ensure healthy lives and promote wellbeing for all at all ages. This new goal includes a number of ambitious targets related to HIV:

- By 2030, end the AIDS epidemic
- By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning
- Support the research and development of vaccines and medicines
- Substantially increase health financing and the recruitment, development, training and retention of the health workforce (5).

Global Progress in Reducing HIV Infection in Children

Most children with HIV acquired the virus through mother-to-child transmission (MTCT). HIV-infected women can transmit HIV to their infants during pregnancy, labour and delivery, and through breastfeeding. However, MTCT is almost entirely preventable where services are accessible and utilized.

Since 2010 there has been a 41% decline in new HIV infections among children age 0–14 years of age globally (2). PMTCT services, including universal HIV testing for pregnant and breastfeeding women and the provision of ARV drugs, have reduced MTCT rates from approximately 30–45% in breastfeeding populations to less than 2% in some countries.

Infants who are HIV-infected are at high risk for disease progression in the first year of life. In fact, without treatment, one third of infants with HIV die before they reach one year of age and over 50% die by the 2 years (6). As such, it is critical to initiate HIV-infected infants on ART as early as possible. The key to early access to treatment is early diagnosis, highlighting the importance of testing HIV-exposed infants for HIV infection as early as possible and regular testing for HIV-exposed infants according to the national infant testing algorithm, until final HIV status determination the end of breastfeeding.

Areas for improvement:

- Infant HIV testing: in 2018 only 54.9% of HIV-exposed infants were tested for HIV within the recommended first 2 months of life (7). Even fewer are retained in care and tested at 18 months of age or after the end of breastfeeding.
- Paediatric HIV diagnosis and provision of ART: Only 54% of the 1.7 million children living with HIV around the world received ART (2).

Appendix 1A: Sample Training Agenda

As this curriculum is modular, the training agenda is flexible. Although the classroom component of the curriculum can be completed in 3 consecutive days, the content may be taught over a longer period of time, for example Monday and Tuesday afternoon, the full day on Wednesday and then Thursday and Friday afternoon. Teaching the content over a longer period of time may minimize disruptions to clinical services. The 3-day classroom experience is complemented with a 2-day practicum; total time for the full course is 5 days.

5-day schedule

Day 1	
Morning Session	• Registration • Module 1: Course Introduction (2 hours, 25 minutes) • Module 2: Testing of HIV-exposed infants (2 hours, 5 minutes)
LUNCH	
Afternoon Session	• Module 2 (continued) • Module 3: Comprehensive Care for HIV-exposed Infants (2 hours, 25 minutes) • "*How Did it Go?*"
Day 2	
Morning Session	• Recap and "*Morning Rounds"* • Module 3 (continued) • Module 4: Pre-test Information and DBS Collection for Infant Virological Testing (4 hours, 10 minutes)
LUNCH	
Afternoon Session	• Module 4 (continued) • "*How Did it Go?*"
Day 3	
Morning Session	• Recap and "*Morning Rounds"* • Module 5: Post-test Counselling for Infant HIV Testing (4 hours, 5 minutes)
LUNCH	
Afternoon Session	• Module 5 (continued) • Module 6: Course Summary, Practicum and Wrap Up, Session 6.1 only (20 minutes) • Optional visit to Practicum sites to meet mentors
Day 4	
Morning Session	• Clinic-based Practicum
LUNCH	
Afternoon Session	• Clinic-based Practicum
Day 5	
Morning Session	• Clinic-based Practicum
LUNCH	
Afternoon Session	• Module 6: Course Summary, Practicum and Wrap Up, Sessions 6.2, 6.3, and 6.4 (3 hours, 25 minutes)

Appendix 1B. Infant HIV Testing Training Objectives

By the end of this training, participants will be able to:

1. Understand the importance of infant HIV testing
    - List the WHO recommendations for HIV testing of HIV-exposed and sick infants and children
2. Identify the infants that need testing and which test to use
    - Decide—based on age and HIV-exposure status—which HIV testing procedure to use to diagnose HIV in an HIV-exposed or sick infant or child
    - Understand the meaning of a positive and negative HIV virological nucleic acid testing (NAT) or serological test result
    - Understand the importance of re-testing to confirm HIV-positive test results
3. Provide care for HIV-exposed infants and their families from birth through the end of breastfeeding
    - Describe the key components of care for HIV-exposed infants (identification of HIV-exposed infants, preventive care such as ARV prophylaxis and cotrimoxazole prophylaxis, routine infant care including growth monitoring, family care and support, community linkages/referrals)
    - Discuss strategies to support caregivers/parents of HIV-exposed children on adherence to their own ART regimen(s) and to their child's medication regimens
    - Describe the signs and symptoms suggestive of HIV infection in infants
    - Be able to counsel caregivers on the importance of bringing HIV-exposed infants promptly to clinic if they are ill to prevent morbidity and mortality
    - Understand the importance of infant retention in care from birth through the end of breastfeeding and final HIV test
    - Discuss ways to improve retention in care for HIV-exposed infants
4. Provide HIV testing
    - Conduct the HIV pre-test information session for any HIV-exposed infant scenario
    - Obtain the infant blood sample by heel, toe or finger prick and collect on filter paper
    - Dry, pack and store DBS blood samples
    - Conduct the post-test counselling session for caregivers of infants and children who have an HIV-negative test result and those with an HIV-positive test result
    - Discuss systems for maintaining database/registers and records with activities related to the care and testing of HIV-exposed infants
5. Recognize the importance of immediately initiating infants diagnosed with HIV on ART and timely linkages to other care services

Appendix 1C: Pre- and Post- Test

Participant identification number: _____ **Score:** ____/20

1) True or False: New HIV infections in infants and children under the age of 15 years have fallen dramatically since 2000.
   a) True
   b) False

2) True or False: Birth testing (using nucleic acid testing, or NAT) accurately diagnoses HIV in infants who acquired the infection during childbirth.
   a) True
   b) False

3) The World Health Organization (WHO) recommends final testing of HIV-exposed infants at least how many weeks/months after breastfeeding has ended?
   a) 3 weeks
   b) 6 weeks
   c) 3 months (12 weeks)
   d) 4 months (16 weeks)

4) Baby H, who is 6 months old, is brought to your outpatient clinic by her mother for diarrhoea. The mother reports that she and her baby have never been tested for HIV. You find no record of HIV testing on the antenatal card or child health card. What do you do to find out if the child is HIV-exposed?
   a) Test Baby H after complete cessation of breastfeeding
   b) Test Baby H using rapid diagnostic testing (RDT)
   c) Test the mother using RDT
   d) Test the infant by virological testing using NAT technology

5) Because of declining levels of maternal HIV antibody in the infant, rapid diagnostic testing (RDT) cannot reliably be used to determine HIV-exposure in infants/children in what age group?
   a) At birth
   b) From birth to 8 weeks of age
   c) 2–4 months of age
   d) 4–18 months of age

6) When would you provide HIV testing for an infant, even if the mother tests HIV-negative?
   a) If the infant shows signs of HIV disease
   b) There is no need to test an infant whose mother tests HIV-negative
   c) At 6 weeks of age
   d) If the mother is healthy

7) According to World Health Organization (WHO) guidelines, the following infants are at increased risk of acquiring HIV infection:
   a) Infants of mothers who received less than 4 weeks of ART at time of delivery,
   b) Infants of mothers who have a viral load (VL) >1000 copies/mL in the 4 weeks before delivery,
   c) Infants whose mothers are identified as HIV-infected during the breastfeeding period
   d) All the above

8) Baby A tests HIV-positive by nucleic acid testing (NAT) at his 6 week visit. How do you interpret this test result?
   a) Baby A is HIV-exposed
   b) Baby A is likely HIV-infected; start ART right away and send a confirmatory NAT
   c) Baby A is likely HIV-infected; wait for the results of confirmatory NAT before starting ART
   d) Baby A is in the window period

9) Baby B is a 9-month old HIV-exposed infant and is still breastfeeding. Her 9-month nucleic acid test (NAT) result was negative. How do you interpret this result?
   a) Baby B is HIV-exposed and final HIV status is HIV-negative
   b) Baby B is HIV-exposed and final HIV status is unknown
   c) Baby B is not HIV-exposed
   d) Baby B is HIV-infected

10) Baby C is 20 months old and tests HIV-positive by rapid diagnostic testing (RDT). How do you interpret this result?
   a) Baby C is HIV-exposed
   b) Baby C is HIV-infected
   c) Baby C is not HIV-exposed
   d) Baby C is not HIV-infected

11) Baby D is 2 months old and admitted to the hospital. His mother has died and his mother's HIV status is unknown. Baby D tests HIV-negative by RDT. How do you interpret this result?
   a) Baby D is HIV-exposed
   b) Baby D is HIV-infected
   c) Baby D is not HIV-exposed
   d) Baby D is not HIV-infected

12) The infant ARV prophylaxis regimen for the breastfed infant whose mother started antiretroviral therapy (ART) during her second trimester of pregnancy and has an undetectable viral load is:
   a) Twice daily AZT + once daily NVP for 6 weeks
   b) Twice daily AZT for 12 weeks
   c) Once daily NVP for 6 weeks
   d) Once daily NVP for 12 weeks

13) At what age should HIV-exposed infants be started on co-trimoxazole prophylaxis?

a) Birth-2 weeks of age
b) 4–6 weeks of age
c) 6–8 weeks of age
d) 10–12 weeks of age

14) Which of the following infants have signs or symptoms suggestive of HIV infection and should be tested for HIV?
a) Infants who are malnourished, underweight, failing to thrive
b) Infants who are have delayed developmental milestones (rolling over, sitting, babbling)
c) Infants who are diagnosed with TB
d) All the above

15) Which of the following best summarizes the World Health Organization (WHO) recommendation on the duration of breastfeeding for HIV-exposed infants if mother is on ART with adherence support?
a) Women with HIV should breastfeed for at least 12 months, but up to 24 months or longer
b) Women with HIV should wean fully by 12 months of age
c) Women with HIV should wean fully by 8 months of age.
d) Women with HIV should formula feed for the first 12 months of life.

16) True or False: The HIV pre-test counselling session for early infant diagnosis (delivered by the healthcare provider to the HIV-infected mother) would normally include a discussion of how HIV is transmitted between adults.
a) True
b) False

17) If you were pricking an infant to obtain a blood sample for nucleic acid testing (NAT), where would you prick the infant who is 6 weeks old?
a) Heel
b) Big toe
c) Finger
d) Vein in antecubital area of the arm

18) If you were pricking an infant to obtain a blood sample for nucleic acid testing (NAT), where would you prick the infant who is 9 months old?
a) Heel
b) Big toe
c) Finger
d) Vein in antecubital area of the arm

19) The 2016 WHO guidelines strongly recommend that test results from infant virological testing should be returned to the clinic and caregiver within what time period?
a) 2 weeks
b) 4 weeks
c) 6 weeks

d) 8 weeks

20) What is the criteria for ART initiation in an infant or child <18mo of age who tests HIV-positive by nucleic acid testing (NAT)?
   a) Low CD4 percentage (less than 15%)
   b) WHO Clinical Stage 2, 3, or 4
   c) High viral load at time of diagnosis (more than 100,000 copies)
   d) Any infant or child testing HIV-positive by NAT should be started on ART immediately regardless of WHO stage or CD4 count

Pre- and Post-test Answer Key

1. A
2. B
3. C
4. C
5. D
6. A
7. D
8. B
9. B
10. B
11. C
12. C
13. B
14. D
15. A
16. B
17. A
18. B
19. B
20. D

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