

**Continued learning on ART for nurses and clinical
officers:
STUDY AID**

**For use after Basic ART Clinical Training Course
based on
IMAI Chronic HIV Care with ARV Therapy**

Draft March 2004

Please answer the following questions. Some questions may have more than one answer. The answers are on page 23.

1. Multiple studies have demonstrated that patients who are involved with their care decisions and management have better outcomes than those who are not.
 - A. True
 - B. False

For questions 2-6, choose the letter that best matches each statement below:

- A. Assess
 - B. Advise
 - C. Agree
 - D. Assist
 - E. Arrange
2. I would like to discuss a medication with you which you need to take everyday, twice a day. It is called Cotrimoxazole. It is important to take everyday to prevent infections such as diarrhoea, lung infections, or an infection in your brain (brain abscess) that can happen with HIV.
 3. How have you been? Have you developed any new symptoms or problems? How are things at home?
 4. I would like to see you here in 2 weeks on April 21, 2004 at 11:30. If you have any of the problems with the Cotrimoxazole which we discussed, come to the health centre right away.
 5. We have discussed Cotrimoxazole and the benefits it can have for you in preventing infections that occur with HIV. It is difficult to take medicines everyday, but it is important to take the Cotrimoxazole. How does this sound to you?
 6. There is a PLHA support group that meets on Thursdays twice a month. Here people can help each other out with sticking to the treatment as well as discuss other problems that come up with treatment for HIV. Some patients have found this support group helpful, and I thought you may be interested in seeing what it is about. It is meeting this Thursday at the health centre at 6:00pm.
 7. HIV:
 - A. Attacks red blood cells
 - B. Attacks white blood cells (CD4)
 - C. Attacks the liver
 8. What is an opportunistic infection?

- A. An infection that takes advantage of the weakness of the immune system to cause disease
 - B. An infection that takes advantage of an open lesion in a person's body to cause disease
 - C. A disease for which only home care works
9. How long does it usually take before a person has symptoms of AIDS after he or she has been infected?
- A. Around 5-10 weeks
 - B. Around 5-10 months
 - C. Around 5-10 years
10. HIV can be transmitted through (*circle all true*):
- A. Mosquito bites
 - B. Anal sexual intercourse
 - C. Kissing an HIV+ person on the mouth
 - D. Vaginal sexual intercourse
 - E. Oral sexual intercourse
 - F. From mother to child during pregnancy, delivery, and breastfeeding
 - G. Hugging an HIV+ person
 - H. Blood exposure from using non-sterilised needles or sharps
 - I. Sleeping in the same bed as an HIV+ person
 - J. Drinking from the same cup as an HIV+ person

For Questions 11-21, match the appropriate WHO Clinical Stage to the case.

- A. Stage 1
 - B. Stage 2
 - C. Stage 3
 - D. Stage 4
11. Patient is a 25 year old HIV+ man who has a history of generalized lymphadenopathy and now comes to the health centre complaining of white sores in his mouth. On examination of his mouth, you see white patches that can be scraped off.
12. Patient is a 45 year old HIV + man who has smear positive sputums.
13. Patient is a 51 year old HIV + woman who is new to the health centre. In reviewing her medical history, she tells you that she had a "bad rash" on her chest 2 years ago which was very painful. On physical examination, you observe a scar on the right side of her chest extending from under her right nipple to her right armpit.
14. Patient is a 33 year old HIV + man who had cryptococcal meningitis 5 months ago and now is on treatment for pulmonary TB.
15. Patient is a 22 year old HIV+ woman who returns to the health centre with complaints of an itchy rash on her arms and legs.
16. Patient is a 30 year old HIV+ woman with some weight loss and recurrent sinusitis.

17. Patient is a 20 year old HIV + woman with recurrent mouth ulcers and now is found to have TB in her cervical lymph nodes.
18. Patient is a 39 year old HIV + man with weight loss and recurrent (over 1 month) diarrhoea.
19. Patient is a 19 year old HIV+ woman with chronic (over 1 month) large, painful wounds on the genital area and anus.
20. Patient is a 42 year old HIV + woman who comes to the health centre, because she cannot eat anymore and is losing weight. She tells you that she has severe pain when she swallows food, even soft foods. On physical examination, you observe that she has white patches in her mouth as well.
21. Patient is a 21 year old HIV + woman with invasive cervical cancer and intermittent diarrhoea for 1 month.
22. A person infected with HIV has 10 times more chance to get TB than a person who is not infected by HIV does.
 - A. True
 - B. False
23. Patient is a 55 year old HIV + woman who is brought to the health centre by her family, because she has been acting confused. The family tells you that she has been mainly bedridden for several months. She has also been having fevers off and on during this time. On examination, you notice that she is extremely thin (wasted) and very confused. On memory examination, you realize that she has problems registering and recalling the items you have asked her to remember. The family heard about ART from a friend and wants you to start her on ART. You are the health worker at the first level facility. What is the appropriate course of action:
 - A. Tell the family that this common for the patient's age and counsel them how to take care of her.
 - B. Refer the patient to the distict clinician to consider causes of fever and dementia and to decide on ARV regimen.
 - C. Start patient on ART now, since her symptoms put her in HIV clinical stage 4.

For questions 24-28, match the drug abbreviation to the generic name of the drugs used in the first-line regimens..

- A. D4T
- B. ZDV
- C. EFV
- D. NVP
- E. 3TC

24. Nevirapine

25. Zidovudine
26. Lamivudine
27. Efavirenz
28. Stavudine
29. What is the goal of Antiretroviral therapy (ART):
- A. Decrease the number of CD4 as much as possible and increase the number of virus in the blood
 - B. Increase the number of OIs in the body and increase the number of CD4 as much as possible
 - C. Decrease the number of virus in the blood and increase the number of CD4 as much as possible
30. A 38 year old HIV + woman comes to the health centre complaining of fever and weight loss over the past month. She denies having cough or night sweats. She is not producing sputums. You check her weight and see that she has lost 3 kg and her temperature is 37C. The rest of her physical exam is normal. When indicating her TB status on the Treatment Card, you write:
- A. Refer: ?TB
 - B. No signs
 - C. Active TB
31. If an HIV+ patient comes to the clinic, you should (*circle all that apply*):
- A. Ask if any symptoms
 - B. Assess adherence to medication
 - C. Look for new signs
 - D. Do Labs (Hgb, RPR; CD4) if available
 - E. Determine functional status
 - F. Send for referral to district clinician
 - G. Determine clinical staging
 - H. Start ARV
 - I. Assess pregnancy and family planning status in fertile women
 - J. Review TB status
 - K. Give TB treatment as prophylaxis
32. When an HIV + patient comes to the clinic for the first time, you should **ASK** the following (*circle all that apply*):
- A. Review history
 - B. Check record for TB
 - C. Check for new symptoms or problems
 - D. Check for tetanus prophylaxis
 - E. Check if recent urgent medical care
 - F. Check if recent minor trauma
 - G. Check which medications are taken

- H. Check for adherence to prescribed drugs
 - I. Check if any other drugs such as traditional remedies, TB, ARVs, illicit drugs are taken
 - J. Check if the patient is married or not
 - K. Check what the patient does for a living
 - L. Check how things are at home
33. When an HIV+ patient comes to the clinic, you should **LOOK** at the following (*circle all that apply*):
- A. Pallor
 - B. Height
 - C. Weight
 - D. White of the eyes- yellow?
 - E. Count pills
 - F. Thrush
 - G. Teeth
34. If an HIV+ patient comes to the clinic and has some new symptoms, you should (*circle all that apply*):
- A. Send the patient to the district hospital
 - B. Measure temperature
 - C. Check for nodes. If >2cm use Acute Care
 - D. Look for rash
 - E. Check haemoglobin
 - F. Check CD4
 - G. Look for evidence of violence
 - H. Do a chest X-Ray
 - I. Do further assessment of symptoms
35. An HIV+ patient (not on ART) comes back to the clinic after you suspected TB at the last visit and had sent sputums. You now have the results-*new positive sputums*. You should (*circle all that apply*):
- A. Start TB treatment
 - B. Start TB and ART treatment
 - C. Consider if the patient is eligible for ART and start ART
 - D. Consider, if the patient is eligible for ART, how and when to refer for ART co-treatment
36. An HIV+ patient (on ART) comes back to the clinic after you suspected TB at the last visit and had sent sputums. You now have the results-*new positive sputums*. You should (*circle all that apply*):
- A. Start TB treatment (as co-treatment with ART)
 - B. Refer to district clinician for co-treatment.
 - C. Stop ART and start TB treatment
37. You suspect TB in an HIV+ patient not on ART, you should (*circle all that apply*):
- A. Send 3 sputums

- B. Refer if not producing sputums
 - C. Refer if there are no nodes
 - D. Start TB treatment
 - E. Refer for ART
38. If an HIV+ patient, who is eligible for ART, presents with a severe illness, you should:
- A. Refer to district clinician for OI management and to decide on ARV regimen
 - B. Refer to district clinician for ART
 - C. Treat accordingly to National Guidelines
 - D. Start ART
39. If an HIV+ patient, who is eligible for ART, has non-severe pneumonia and is being treated with antibiotics, you should:
- A. Start ART
 - B. Start TB treatment
 - C. Start ART and TB co-treatment
 - D. Wait for 2 weeks after completing antibiotics (to be sure this was not TB) before starting ART
40. If an HIV+ patient, who is eligible for ART, has malaria or a mouth/throat infection or an STI or any other condition requiring antibiotics, you should (*circle all that apply*):
- A. Treat as in *Acute Care* guidelines
 - B. Do not start ART until treatment completed and no longer febrile
 - C. Start ART in conjunction with treatment for OIs
 - D. Refer to the district clinician
 - E. Check TB status
41. If an HIV+ patient, who is eligible for ART, has prurigo or a chronic skin problem, you should:
- A. Refer to the district clinician
 - B. Stabilize skin problem and then start ART
 - C. Start ART only. It will cure the skin problem also
 - D. Start ART and manage skin problem following *Acute Care*
42. If an HIV+ patient, who is eligible for ART, has drug reaction, you should:
- A. Start ART, this is not an OI
 - B. Treat the drug reaction and start ART at the same time
 - C. Do not start ART during an acute drug reaction
43. If an HIV+ patient, who is eligible for ART, has oesophageal thrush and is able to swallow fluconazole, you should (*circle all that apply*):
- A. Start ART and fluconazole together
 - B. Refer to district clinician

- C. Refer to district clinician only if severe thrush
 - D. Start ART after fluconazole treatment
44. If an HIV+ patient, who is eligible for ART, has persistent diarrhoea and has already had empirical treatment, you should:
- A. Stabilize diarrhoea and then start ART
 - B. Refer to district clinician for complete evaluation
 - C. Start ART not waiting for resolution
45. If an HIV+ patient, who is eligible for ART, has non-severe anaemia which is not responding to treatment, you should:
- A. Refer to district clinician for complete lab assessment
 - B. Solve anaemia and start ART
 - C. Do not delay ART
46. You have an HIV+ patient with smear-positive TB only (no other signs of stage 3 or 4). Patient is gaining weight on treatment. CD4 test is not available. You should:
- A. Start and complete TB treatment, then start ART
 - B. Start ART after TB treatment initiation phase
 - C. Refer to district clinician for TB/ARV treatment plan
47. You have an HIV+ patient with smear-negative TB only (no other signs of stage 3 or 4). Patient is gaining weight on treatment. CD4 test is not available. You should:
- A. Start and complete TB treatment, then start ART
 - B. Start ART after TB treatment initiation phase
 - C. Consult/refer to district clinician for TB/ARV treatment plan
48. You have an HIV+ patient with pulmonary TB, and during treatment, new prolonged fever appears. CD4 test is not available. You should:
- A. Start and complete TB treatment, then start ART
 - B. Start ART after TB treatment initiation phase
 - C. Continue TB treatment and refer to district clinician for decision on co-treatment.
49. You have an HIV+ patient with extra-pulmonary TB on treatment. CD4 test is not available. You should:
- A. Start and complete TB treatment, then start ART
 - B. Start ART after TB treatment initiation phase
 - C. Continue TB treatment and refer to district clinician for decision on co-treatment.
50. You have an HIV+ patient who completed treatment for extra-pulmonary TB. No new complications or signs are present. CD4 test is not available. You should:

- A. Start Art
 - B. Refer to district clinician
 - C. Not eligible for ART
51. The 7 requirements to initiate ART at the health centre (working under supervision of MD/MO) are (*circle all that apply*):
- A. HIV infection confirmed orally by lab technician
 - B. CD4 count
 - C. Medical eligibility
 - D. Chest X-Ray
 - E. Reliable drug supply
 - F. Criteria to be started on ART at first level facility
 - G. OIs stabilized (with the exception of chronic skin problems, persistent diarrhoea, anaemia)
 - H. All OIs stabilized
 - I. HIV infection confirmed by written documentation
 - J. Patient ready to start
 - K. On prophylaxis
 - L. Supportive clinical team
52. An HIV+ patient needs to fit the following criteria to be started on ART at the first level facility (*circle all that apply*):
- A. No condition requiring referral to district clinician (severe illness or stage 4 -except non-severe oesophageal thrush or chronic herpes simplex)
 - B. Not on TB treatment
 - C. On prophylaxis
 - D. No prior use of ARV (for all reasons including PMTCT)
 - E. Not a child
 - F. Not a pregnant woman
 - G. No peripheral neuropathy
 - H. No jaundice or known liver problems
 - I. No prior use of ARV except nevirapine for PMTCT
53. An HIV+ patient is ready for ART if (*circle all that apply*):
- A. Patient understands ART, side effects, limitations, adherence schedule, etc
 - B. Patient does not live alone
 - C. Patient is ready for treatment adherence
 - D. Patient is involved in own care and does not need anybody else
 - E. Patient is actively involved in own care
 - F. Treatment supporter available if possible
 - G. Recent proof of adherence to TB treatment
 - H. No recent non adherence to care or medication
 - I. Barriers to adherence addressed
 - J. Patient living close to health facility
54. A person who is HIV+ and on ART cannot transmit HIV to another person.

- A. True
- B. False

55. A person who is HIV+ and on ART can get reinfected with a different strain of HIV.

- A. True
- B. False

56. In order to educate an HIV+ person on safer sex, you should (*circle all true*):

- A. Tell them to always use condoms.
- B. Tell them it is okay to have unprotected sexual intercourse with multiple partners once they are on ART.
- C. Advise them to stay faithful to one partner.
- D. If the patient is a man, advise him to not have sex with teenagers or girls.

57. When counselling an HIV+ couple who do not want children, you should advise them to use only one form of contraception such as a condom.

- A. True
- B. False

58. When counselling a couple, you should (*circle all true*):

- A. Advise the partner to be tested if he/she has not.
- B. Since they are both HIV+, tell them that they do not need to use condoms.
- C. Educate them that if the patient is on ART, HIV can still be passed to his/her partner.
- D. Recommend dual protection if the couple does not want a child.
- E. Tell them that mother to child transmission can occur.
- F. Refer them to family planning and/or PMTCT if a child is desired.

59. In advising an HIV+ woman to prevent mother to child transmission of HIV, you educate her on all the modes of transmission (*circle all true*):

- A. Pregnancy
- B. After birth, through kissing her child
- C. At the time of delivery
- D. After birth, through breastfeeding
- E. After birth, through hugging or holding her child.

60. There exists certain methods (such as ART, bottle feeding) which reduces the risk of mother to child transmission.

- A. True
- B. False

61. In discussing disclosure, you should tell the patient's partner that the patient is HIV+.
- A. True
 - B. False
62. In discussing disclosure, you should (*circle all true*)
- A. Inform the patient that you will keep the result confidential only if the patient tells his/her partners.
 - B. Ask the patient if he/she is ready to tell anyone their results.
 - C. Educate that telling his/her partners about HIV results can make it easier to introduce condoms and reduce the risk of passing on the virus.
 - D. Warn the patient that telling the partner will likely decrease the support that the patient would receive, so they should keep the results confidential.
 - E. Advise them to also discuss their results with their children, other family, and close friends.
 - F. Make a plan for who they will tell, when they will tell, and what will help them tell.
63. In discussing disclosure with a woman, you need to be sensitive about the benefit of her telling her partner versus the risk (for example if she is afraid that he will abandon her or become violent with her if she tells him).
- A. True
 - B. False
64. All of the following is advice you should give your patient to prevent getting other infections (*circle all true*):
- A. Cook food until it is thoroughly heated,
 - B. Cover food
 - C. Drink water from a used cup
 - D. Drink boiled water
 - E. Wash your hands after you use the toilet
 - F. Use an insecticide treated bednet
65. You should encourage your patient how to live well with HIV in all of the following ways (*circle all true*):
- A. Eat foods high in protein, fat, and carbohydrates.
 - B. Do physical activities such as walking
 - C. Eat foods high in sugar (such as sweets) to help stimulate weight gain.
 - D. Eat many small meals a day.
66. Not understanding what HIV is or the treatment could cause a problem with adherence.

- A. True
- B. False

67. In advising about ART, you should tell him/her (*circle all true*):

- A. Drugs can be taken any time during the day.
- B. Drugs must be taken everyday for life at the exact same time.
- C. Drug doses can be doubled if he/she forgets to take it one day.
- D. Always carry some tablets as they go to work or on a journey.

68. ART is a lifelong drug.

- A. True
- B. False

69. ART will cure HIV after 2 years.

- A. True
- B. False

70. ART is not a cure, but helps in feeling well longer.

- A. True
- B. False

71. What are examples of methods which you can teach the patient to remember to take his/her pills (*circle all true*):

- A. HIV Care/ART card
- B. Pillbox
- C. Explain written schedule using the Patient Treatment Card
- D. Pill chart or diary
- E. Set reminder on mobile phone or alarm clock or by television/radio show
- F. Talk to patient with treatment supporter
- G. Refer him/her to the Family Planning Clinic

72. For a patient who is HIV+, starting ART is urgent.

- A. True
- B. False

73. How many antiretrovirals should be taken in order to have an effective regimen and to prevent resistance for a significant amount of time?

74. Incorrect use of ART can cause resistance to several antiretroviral drugs:

- A. True
- B. False

75. A first-line regimen is a combination of drugs that will be used in a patient who has no prior ART experience. Write down 4 examples of good first line combinations:

76. What are the 5 A's for chronic HIV care?

- A. ART
- B. Awareness
- C. Advise
- D. Assess
- E. Ask
- F. Adhere
- G. Arrange
- H. Agree
- I. Assist
- J. Aid

77. The HIV virus can defend itself against a low concentration of drugs, but not against a high concentration of drugs. This is why we need to make sure that there is always a high concentration of drugs, by taking our pills correctly and taking into consideration that interactions with other drugs can lower the concentration.

- A. True
- B. False

78. If a patient who is on D4T-3TC-NVP forgets to take more than 3 pills per month, resistance will develop.

- A. True
- B. False

79. You should only start ART after you have checked the CD4 count.

- A. True
- B. False

80. Your patient is a 32 year old HIV+ man who develops big abscesses on his leg with yellow pus coming out of them. He has a history of pulmonary TB for which he has completed therapy in the last year. He comes to you for ART. You check his CD4 and see that it is 360. You should:

- A. Start him on Cotrimoxazole prophylaxis and on ART after treating his infection.

- B. Start him on Cotrimoxazole prophylaxis and refer him to the hospital for diagnosis and treatment of the infection. An assessment for ART can be made there.
 - C. Start him on Cotrimoxazole prophylaxis only right now and treat his infection.
81. A patient new to the health centre comes to see you. She is a 50 year old HIV + woman who tells you that she once had purple-black lesions on the skin of her chest and her mouth but have resolved. She was started on ART one year ago and had been symptom free for 1 year but now has developed vaginal candidiasis. What WHO Clinical Stage is she now?
- A. Stage 1
 - B. Stage 2
 - C. Stage 3
 - D. Stage 4
82. Cotrimoxazole prophylaxis should be started for which clinical stages in a HIV+ patient (*circle all true*):
- A. Stage 1
 - B. Stage 2
 - C. Stage 3
 - D. Stage 4
83. Cotrimoxazole prophylaxis for HIV+ persons helps to reduce the risk of getting (*circle all true*):
- A. Certain types of pneumonia caused by organisms such as *S. pneumoniae* and *Pneumocystis carinii*
 - B. *Mycobacterium tuberculosis*
 - C. Herpes Zoster
 - D. *Toxoplasma* brain abscess
 - E. Certain types of diarrhoea caused by organisms such as *Isospora Belli*
 - F. Certain types of mouth sores caused by *Herpes Simplex*
84. Shared confidentiality means that you as the health worker have the duty to share the patient's HIV status with his family.
- A. True
 - B. False
85. Cotrimoxazole prophylaxis should be started when the CD4 count is less than 200 cells/mm³.
- A. True
 - B. False
86. If an HIV+ patient has no access to ART, then the primary cotrimoxazole prophylaxis should be taken for the rest of his/her life.

- A. True
 - B. False
87. If an HIV+ patient has access to ART, the primary cotrimoxazole prophylaxis should be stopped as soon as ART is started.
- A. True
 - B. False
88. Your patient is a 42 year old HIV+ woman who is started on Cotrimoxazole prophylaxis 4 days ago. She comes to the health centre because she has had a “bad rash” that does not seem to be improving. On physical exam you observe multiple areas of peeling, reddish-black skin that look like burning wounds. There is also involvement of the eyes and mucosa of the mouth. She tells you that she has been feeling feverish at home and thought that she may be developing AIDS. You should:
- A. Stop the Cotrimoxazole and start patient on ART right away.
 - B. Stop the Cotrimoxazole and have the patient follow-up at the clinic in 1 week.
 - C. Stop the Cotrimoxazole and refer the patient to the hospital right away.
 - D. Continue the Cotrimoxazole and start the patient on ART after preparing for adherence.
89. Before starting a patient on Cotrimoxazole, you should ask her about previous history to what allergy?
- A. Sulpha allergy
 - B. Shellfish allergy
 - C. Egg allergy
 - D. Salicylic acid allergy
 - E. Penicillin allergy
90. You decide to start your patient on Cotrimoxazole prophylaxis with his agreement. How many days supply should you give him?
- A. 60
 - B. 14
 - C. 32
 - D. 90
91. Patient is a 29 year-old HIV+ man who comes to your clinic asking for ART. He has a history of mild weight loss, prurigo, recurrent sinusitis, and angular cheilitis. He also had herpes zoster 3 years ago. He has no other signs of stage 3 or 4. A CD4 count is not available at your health centre. You should:
- A. Prepare for adherence and start patient on ART
 - B. Recommend patient to start Fluconazole prophylaxis using the 5 A's, because based on his clinical history, his immunity is dropping.
 - C. Use the 5 A's and start patient on Cotrimoxazole prophylaxis.

- D. Use the 5 A's and start patient on Cotrimoxazole and ART.
92. When discussing ARV therapy with your patient, you can tell them, "It is important to take ART every 12 hours, but if you forget and remember within 4 hours, it is okay to take it then."
- A. True
B. False
93. In a resource limited setting, you may advise the patient that he may share his ART with a family member who is HIV+ in order to prevent resistance from emerging.
- A. True
B. False
94. If a patient has a known history of non-adherence, for example a TB defaulter, he should be excluded from getting ART even if he is medically eligible.
- A. True
B. False
95. If a patient cannot bring his treatment supporter with him to the health centre, he should be excluded from getting ART even if he is medically eligible.
- A. True
B. False
96. Once a patient is considered to be medically eligible for ART, it takes at least 2 to 3 visits and the involvement of others on the clinical team and the treatment supporter before starting ART.
- A. True
B. False
97. What are the 7 requirements for ART (*circle all true*):
- A. CD4<200
B. HIV written documentation of a positive test
C. Reliable drug supply
D. Laboratory availability at the first-level facility
E. Medical eligibility
F. Patient fits the criteria to be started on ART at first-level facility
G. Patient fits the criteria of being in WHO clinical stage 4
H. Patient fits the criteria of not having pulmonary TB
I. Any opportunistic infection has been treated and stabilized
J. Patient is ready for ARV therapy
K. Patient has a treatment supporter
L. Supportive clinical team prepared for chronic care

98. It is okay for patient to be started on ART if there is a clinical suspicion of HIV infection, and the patient has severe wasting.
- A. True
 - B. False
99. If CD4 testing is available, all of the following patients are medically eligible for ART **except**:
- A. 49 year- old HIV+ woman with Kaposi sarcoma and CD4 count of 210 cell/mm³
 - B. 26 year-old HIV+ man with a CD4 count of 150 cells/mm³
 - C. 51 year-old HIV+ man who just completed treatment for pulmonary TB and has recurrent diarrhoea and a CD4 count of 300 cells/mm³.
 - D. 35 year-old HIV+ woman with prurigo and a CD4 count of 100 cells/mm³
 - E. 22 year-old HIV+ man with angular cheilitis and recurrent mouth ulcers and a CD4 count of 250 cells/mm³.
100. It is okay to start ART earlier than planned only if the patient is experiencing a severe acute opportunistic infection.
- A. True
 - B. False
101. Patients should not be started on ART at the level of the health centre if they have any of the following (*circle all true*):
- A. Chronic herpes simplex
 - B. Acute stage 4 condition
 - C. Fever
 - D. Oesophageal thrush which can be treated
 - E. Neurological symptoms
 - F. Unexplained cough
102. What are examples of opportunistic infections which may not improve until ART is started (*circle all true*):
- A. Oral thrush
 - B. Oesophageal thrush which can be treated
 - C. Prurigo
 - D. Pulmonary TB
 - E. Persistent diarrhoea that has already been treated empirically
 - F. Non-severe anaemia that has not responded to treatment
103. A 20 year-old HIV+ woman has been diagnosed with pulmonary TB through positive smears. She has no other signs of stage 3 or 4. No CD4 count is available at the first-level health centre. You should:
- A. Start TB treatment and then start ART once TB treatment is completed if she is eligible
 - B. Refer patient to district clinician for co-treatment
 - C. Start ART now and treat TB later

104. A 33 year-old HIV+ woman who has been on ART for 5 months has just been diagnosed with smear-positive pulmonary TB. At the first-level health centre, you should:
- A. Continue ART and start TB treatment.
 - B. Stop ART and start TB treatment. Once TB treatment is completed, you can then restart ART.
 - C. Refer patient to the district clinician for co-treatment
105. A 41 year-old HIV+ man who is on treatment for TB in the cervical lymph nodes. At the first-level health centre, you should
- A. Continue TB treatment and start ART now
 - B. Continue TB treatment and refer patient to the district clinician for co-treatment
 - C. Complete TB treatment and then start ART
106. A 25 year-old HIV + man who has completed treatment for pulmonary TB and has developed prurigo. His CD4 count is 190 cells/mm³. At the first-level health centre, you should:
- A. Start ART
 - B. Refer patient to the district clinician
 - C. Treat prurigo first and then start ART
107. A 38 year-old HIV+ man who is on treatment for smear-positive pulmonary TB and has developed thrush. No CD4 count is available at the first-level health centre. You should:
- A. Continue TB treatment and start ART now
 - B. Continue TB treatment and refer patient to the district clinician for co-treatment
 - C. Complete TB treatment and then start ART
108. A 42 year-old HIV + woman has just completed treatment for extrapulmonary TB and has no new symptoms or complications. At the first-level health centre, you should:
- A. Start ART
 - B. Refer patient to the district clinician
 - C. Wait to start ART because the patient is not eligible yet.
109. A 50 year-old HIV + man has been diagnosed with smear-positive pulmonary TB. His CD4 count is 150 cells/mm³. At the first-level health centre, you should:
- A. Start TB treatment and start ART once TB treatment is completed
 - B. Start TB treatment and call for advice on which ART to start once TB treatment is tolerated
 - C. Start TB and ART co-treatment now

110. A 30 year-old HIV+ man has been diagnosed with smear-positive pulmonary TB. His CD4 count is 250 cells/mm³. At the first-level health centre, you should:
- A. Start TB treatment and start ART once TB treatment is completed
 - B. Start TB treatment and call for advice on which ART to start after TB initiation phase
 - C. Start TB and ART co-treatment now
111. A 40 year-old HIV + man has been diagnosed with smear-positive pulmonary TB and has a history of recurrent diarrhoea despite empirical treatment. His CD4 count is 360 cells/mm³. At the first-level health centre, you should:
- A. Start TB treatment and start ART once TB treatment is completed
 - B. Start TB treatment and call for advice on which ART to start after TB treatment is tolerated
 - C. Start TB and ART co-treatment now
 - D. Start TB treatment and defer ART until patient is medically eligible
112. A 45 year-old HIV + man has been diagnosed with smear-positive pulmonary TB. He has no other signs of stage 3 or 4. His CD4 count is 360 cells/mm³. At the first-level health centre, you should:
- A. Start TB treatment and start ART once TB treatment is completed
 - B. Refer patient to district clinician for co-treatment
 - C. Start TB and ART co-treatment now
 - D. Start TB treatment and defer ART until patient is medically eligible
113. A 29 year-old HIV + woman who has chronic fevers develops thrush. You give nystatin for the oral thrush, and it resolves. CD4 count is not available at the first-level health centre. You should:
- A. Refer her for assessment of the fever before starting ART
 - B. Start ART now, because the ART will decrease the fever
 - C. Give antimalarial drugs and start ART at the same time
114. A 19 year-old HIV+ man has persistent diarrhoea and has had multiple empirical treatments. The symptoms are controlled right now. His CD4 count is 200 cells/mm³. At the first-level health centre, you should:
- A. Refer him for assessment of the diarrhoea before starting ART
 - B. Start ART
 - C. Follow-up with the patient regularly, but defer ART until the patient is medically eligible
115. A 33 year-old HIV + woman has chronic fever and a CD4 of 100 cells/mm³. At the first-level health centre, you should:
- A. Refer her for assessment of the fever before starting ART
 - B. Start ART now, because the ART will decrease the fever
 - C. Give antimalarial drugs and start ART at the same time

116. A 29 year-old HIV+ woman has chronic genital herpes simplex ulcers. You have given her acyclovir to try to resolve the herpes simplex without success. There is no CD4 count available at the first-level health centre. You should:
- A. Refer her for assessment of the herpes simplex before starting ART
 - B. Start ART
 - C. Follow-up with the patient regularly, but defer ART until the patient is medically eligible
117. A 45 year-old HIV + man has oesophageal thrush. He is able to swallow Fluconazole, and his symptoms appear to be improving. There is no CD4 count available at the first-level health centre. You should:
- A. Refer him to the district clinician for assessment of the oesophageal thrush before starting ART
 - B. Start Art once Fluconazole treatment is complete
 - C. Follow-up with the patient regularly, but defer ART until the patient is medically eligible
118. A 39 year-old HIV + woman has prurigo and recurrent mouth ulcers. Her CD4 count is 180 cells/mm³. At the first-level health centre, you should:
- A. Refer her to the district clinician for assessment before starting ART
 - B. Start ART
 - C. Follow-up with the patient regularly, but defer ART until the patient is medically eligible
119. A 22 year-old HIV+ man has angular cheilitis. There is no CD4 count available at the first-level health centre. You should:
- A. Refer him to the district clinician for assessment before starting ART
 - B. Start ART
 - C. Follow-up with the patient regularly, but defer ART until the patient is medically eligible
120. A 31 year-old HIV + man has a history of cryptococcal meningitis. He completed treatment 3 months ago and is now stable. There is no CD4 count available at the first-level health centre. You should:
- A. Refer him to the district clinician for assessment before starting ART
 - B. Start ART but can call for advice for treatment plan
 - C. Follow-up with the patient regularly, but defer ART until the patient is medically eligible
121. A 42 year-old HIV+ woman had herpes zoster on the right side of her back 5 days ago. Her CD4 count is 150 cells/mm³. Her herpes lesions are improving, and she has no other symptoms. She comes to

the first-level health centre asking for ART. When talking to her, you find out that she was on ART before, but only Nevirapine, which she took at the onset of labor to prevent mother to child transmission of HIV. You should:

- A. Refer her to the district clinician to assess which ART regimen the patient should start
 - B. Start first line ART
 - C. Start second line ART
 - D. Follow-up with the patient regularly, but defer ART until the patient is medically eligible
122. A 50 year-old HIV + man has a history of peripheral neuropathy and prurigo. His CD4 count is 100 cells/mm³. At the first-level health centre, you should:
- A. Refer him to the district clinician to assess which ART regimen the patient should start
 - B. Start him on an ART regimen without D4T
 - C. Follow-up with the patient regularly, but defer ART until the patient is medically eligible
123. Nevirapine is the only drug in the first-line regimen that requires an escalating dose for the first 2 weeks.
- A. True
 - B. False
124. Side effects such as nausea, headache, dizziness, diarrhoea, feeling tired, and muscle pain are common with ART. They usually occur at the beginning of treatment and then improve within 2-4 weeks.
- A. True
 - B. False

For questions 102-111, match the drug to the common side effect. Some side effects have more than one answer.

- A. D4T
- B. 3TC
- C. NVP
- D. EFV
- E. ZDV

- 125. Yellow eyes
- 126. Pallor
- 127. Skin rash
- 128. Severe abdominal pain
- 129. Numbness and tingling in hands and feet

- 130. Changes in fat distribution
- 131. Bizarre thoughts or confusion
- 132. Fatigue and shortness of breath
- 133. Nightmares or strange dreams
- 134. Muscle pain or inflammation

For questions 112-121, match the side effect to being a major one i.e. requiring referral or a minor one.

- A. Major
- B. Minor

- 135. Nausea
- 136. Skin rash
- 137. Nightmares or strange dreams
- 138. Pallor
- 139. Diarrhoea
- 140. Fatigue and shortness of breath
- 141. Fever
- 142. Difficulty sleeping
- 143. Yellow eyes
- 144. Tingling and numbness in hands and feet
- 145. If a patient has a serious side effect on combination treatment which is so bad that the drug needs to be stopped or changed and you cannot reach the clinician, it is okay to stop only the offending drug in the regimen.
 - A. True
 - B. False
- 146. When an HIV+ patient starts ART and develops symptoms of cough and/or fever, all of the following should be considered as a cause **except**:
 - A. Common infections and other acute and chronic problems (not related to HIV)
 - B. Traumatic injury
 - C. Opportunistic infection from CD4 count still not being high enough
 - D. Immune reconstitution syndrome
 - E. ART side effects

F. Opportunistic infections from failure of therapy

147. An opportunistic infection in a person who is on ART could be due to a failure of therapy. This failure of therapy may be a result of ART losing effectiveness secondary to viral resistance or to poor adherence.
- A. True
 - B. False
148. Immune reconstitution syndrome is:
- A. The improvement of the HIV infection as shown by the clinical condition of the patient
 - B. An opportunistic infection resulting from a failure of therapy
 - C. The stronger immune system reacting to an infection that was invisible, usually within 2-3 months of starting treatment
149. TB immune reconstitution often occurs in the first 6 weeks after initiation of ART and means that the therapy is failing.
- A. True
 - B. False
150. If an HIV+ patient is on ART and develops cough or difficulty breathing, he should be referred to the district clinician for assessment. This could be immune reconstitution syndrome or a serious drug toxicity.
- A. True
 - B. False
151. If an HIV+ patient on ART develops a persistent cough after many months or years of therapy, this may mean that the therapy is no longer working.
- A. True
 - B. False
152. Headache in a patient who is taking ART for a long time is likely due to meningitis in the framework of immune reconstitution syndrome.
- A. True
 - B. False
153. Fatigue without shortness of breath in a person on ART is likely to resolve after the first week of treatment but may last as long as 4-6 weeks with zidovudine.
- A. True
 - B. False

154. Lactic acidosis can present as fatigue or shortness of breath and warrants immediate referral.
- A. True
 - B. False
155. Changes in fat distribution are transient short term consequences of taking ART, and the patient can be told not to worry about them as it will resolve on its own.
- A. True
 - B. False
156. For which of the following conditions should we consult the medical officer or refer (*check all true*)
- A. Diarrhoea in the first week of ART
 - B. Fatigue in the first week of ART
 - C. Yellow eyes
 - D. Headache starting 6 months after starting ART
 - E. Nausea in the first week of ART
 - F. Bizarre thoughts on D4T-3TC-EFV
 - G. Conjunctival pallor
 - H. Difficulty sleeping
 - I. Lipodystrophy
 - J. Dry rash with fever
157. In supporting patients to be adherent, what are examples of barriers of which you should be aware (*circle all true*):
- A. Mental illness
 - B. Communication problems
 - C. Misunderstanding about the disease or treatment
 - D. Motivation about treatment
 - E. Fear that other people will discover HIV status when on medication
 - F. Difficult access to health facility
 - G. ART side effects
158. If an HIV+ mother is not eligible for ART, then a prophylactic ARV regimen should be given during labor and delivery and with a dose to the newborn.
- A. True
 - B. False
159. What are good drug combinations for a pregnant woman who is HIV+ and requires ART (*circle all true*):
- A. D4T-3TC-EFV
 - B. D4T-3TC-NVP
 - C. ZDV-3TC-NVP
 - D. ZDV-3TC-EFV

160. If CD4 laboratory is available at the health centre, it should be checked before patient starts therapy or changes therapy and then every 6 months.
- A. True
 - B. False
161. New symptoms appearing in the first month of ART are likely due to failure of therapy.
- A. True
 - B. False
162. Clinical monitoring can be used if no CD4 count is available at the health centre. If a patient is improving on ART and the CD4 is increasing, the patient's weight should increase and no new opportunistic infections should occur.
- A. True
 - B. False
163. Common manifestations of immune reconstitution syndrome are herpes zoster or tuberculosis occurring shortly after the initiation of ART.
- A. True
 - B. False
164. A 40 year-old HIV+ man is on D4T-3TC-NVP for 3 weeks. This is the first time on ART, and now he develops fever and cough. At the first-level health centre, you should:
- A. Continue his ART and manage his opportunistic infection
 - B. Refer him to the district clinician, because he is likely experiencing an OI from failure of therapy
 - C. Switch his ART regimen, because he is likely experiencing a drug side effect
 - D. Refer him to the district clinician, because he is likely experiencing symptoms of immune reconstitution syndrome
165. An unrecognised immune reconstitution syndrome is never fatal.
- A. True
 - B. False
166. A 35 year-old HIV + woman has been switched to ZDV-3TC-EFV, because she had a bad rash on her previous regimen when she was on D4T-3TC-NVP. She tells you that she has been taking her medication everyday as directed, but now thinks that she may be pregnant. You check a rapid pregnancy test at the health centre and discover that she is, in fact, pregnant. She was started on ART, because she was in clinical stage 4, but she has been doing well for several months now. You should:

- A. Switch her ART regimen, because the ART regimen she is on is harmful to the fetus
 - B. Refer her to the district clinician for assessment and determination of which regimen she should take
 - C. Stop the ART right away, because this regimen will hurt the baby
 - D. Continue the ART she is taking, because this regimen is safe for the baby
167. A 39 year-old HIV+ woman is on D4T-3TC-NVP for 1 year. She was in stage 3 when she first started ART. She has been adherent to the therapy and is tolerating the medications. She has gained 4 kg and has not had any more opportunistic infections since she has started ART. You should:
- A. Switch her ART regimen, because if she gets pregnant, the ART regimen she is on will be harmful to her baby
 - B. Refer her to the district clinician for further assessment
 - C. Stop the ART now that she is doing well
 - D. Continue the ART she is taking, because she is doing well and continue regular follow-up
168. A 37 year-old HIV+ man has been on D4T-3TC-EFV for 2 years. At the start of therapy, he had some problems with sleeping and nightmares, but they have resolved. He tolerates the medications and is adherent to therapy. The CD4 count was measured at baseline (30), month 6 (100), month 12 (140), month 18 (220), and month 24 (205). At the first-level health centre, you should:
- A. Continue to monitor the CD4 count every 6 months, because the decrease is minimal.
 - B. Call the district clinician for advice about the decrease in CD4.
 - C. Switch the ART regimen, because the CD4 count is dropping which means the therapy is not working anymore
169. A 48 year-old HIV+ man has been on D4T-3TC-NVP for 1 year. He tells you that he has been taking the medicines everyday as directed, and now tolerates them despite the initial nausea which has improved. The CD4 count was measured at baseline (20), month 6 (50), and month 12 (100). At the first-level health centre, you should:
- A. Continue the ART and to monitor the CD4 count every 6 months.
 - B. Call the district clinician for advice
 - C. Switch the ART regimen because the CD4 count is not increasing sufficiently
170. A 41 year-old HIV+ woman has been on ZDV-3TC-NVP for 2 years. She tells you that she tolerates the medicines well and has been adherent to therapy. In the first year and half, she had been gaining weight and had no symptoms. Now the patient has lost 4 kg and complains of a cough for the last 3 weeks. On clinical review, you discover that she has been having fevers as well. At the first-level health centre, you should:

- A. Check a haemoglobin and if normal, continue the ART
 - B. Refer to the district clinician, because the symptoms that the patient is experiencing is likely from immune reconstitution syndrome
 - C. Switch the ART regimen, because the symptoms that the patient is experiencing is likely from a drug side effect
 - D. Send sputums and refer to the district clinician, because the symptoms that the patient is experiencing is likely an opportunistic infection from a failure of therapy
 - E. Stop the ART and manage the opportunistic infection
171. Zidovudine and stavudine can be given together. Used in this combination, these drugs will reinforce each other's effect.
- A. True
 - B. False
172. Giving nevirapine and rifampicin together can create resistance to nevirapine secondary to lower blood levels and increase the risk of hepatitis.
- A. True
 - B. False
173. Using ART with oral contraception can make the oral contraception less effective.
- A. True
 - B. False
174. The presence of very fatty food helps the efavirenz to dissolve in the blood, and therefore the patient should be advised to take EFV with foods such as fried chicken and crisps.
- A. True
 - B. False
175. When given together, NVP and ketoconazole can increase liver toxicity.
- A. True
 - B. False
176. If a patient is having a convulsion and is on efavirenz, you should not give rectal or IV diazepam to stop it, because it will make him too sleepy.
- A. True
 - B. False
177. When having a phone consultation with the doctor or medical officer, you should make sure that all of the following information is given to the doctor **except**:

- A. Age and gender
 - B. Patient's main complaint along with pertinent clinical review positives and pertinent negatives
 - C. Clinical stage at the start of ART
 - D. ART regimen and duration of RX
 - E. Patient's safer sexual practices
 - F. Other medications that the patient is taking
 - G. Pertinent abnormalities on the physical exam and laboratory tests
 - H. Reason for calling the MD/MO
178. Which of the following steps should be done after an occupational blood exposure such as a needlestick injury (*circle all true*):
- A. Report immediately to the in charge person of post-exposure prophylaxis (PEP) and initiate PEP as quickly as possible
 - B. Immediately wash wound with soap and water, then irrigate with sterile saline or mild disinfectant
 - C. Send for viral load test and CD4 count immediately if available
 - D. Flush exposed mucous membranes such as eyes with water or sterile saline
 - E. Provide OI prophylaxis
 - F. Test source for HIV (rapid test if available)

ANSWER SHEET

1. A	40. A,B	79. B	118. B	157. A,B,C,E,F,G
2. B	41. D	80. B	119. C	158. A
3. A	42. C	81. D	120. B	159. B,C
4. E	43. C,D	82. B,C,D	121. B	160. A
5. C	44. C	83. A,D,E	122. A	161. B
6. D	45. C	84. B	123. A	162. A
7. B	46. A	85. A	124. A	163. A
8. A	47. C	86. A	125. C,D	164. D
9. C	48. C	87. B	126. E	165. B
10. B,D,E,F,H	49. C	88. C	127. C,D	166. B
11. C	50. A	89. A	128. A	167. D
12. C	51. C,E,F,G,I,J,L	90. C	129. A	168. B
13. B	52. A,B,E,G,H,I	91. C	130. A	169. A
14. D	53. A,C,E,F,H,I	92. A	131. D	170. D
15. B	54. B	93. B	132. A	171. B
16. B	55. A	94. B	133. D	172. A
17. D	56. A,C,D	95. B	134. E	173. A
18. C	57. B	96. A	135. B	174. B
19. D	58. A,C,D,E,F	97. B,C,E,F,I,J,L	136. A	175. A
20. D	59. A,C,D	98. B	137. B	176. B
21. D	60. A	99. E	138. A	177. E
22. A	61. B	100. B	139. B	178. A,B,D,F
23. B	62. B,C,E,F	101. B,C,E,F	140. A	
24. D	63. A	102. C,E,F	141. A	
25. B	64. A,B,D,E,F	103. A	142. B	
26. E	65. A,B,D	104. C	143. A	
27. C	66. A	105. B	144. A	
28. A	67. B,D	106. A	145. B	
29. C	68. A	107. B	146. B	
30. A	69. B	108. A	147. A	
31. A,B,C,D, E,G,I,J	70. A	109. B	148. C	
32. A,B,C,E, G,H,I,L	71. B,C,D,E,F	110. B	149. B	
33. A,C,D,E,F	72. B	111. A	150. A	
34. B,C,D,G,I	73. 3	112. D	151. A	
35. A,D	74. A	113. A	152. B	
36. B	75. D4T-3TC-NVP, D4T-3TC-EFV, ZDV-3TC-NVP, ZDV-3TC-EFV	114. B	153. A	
37. A,B,C	76. C,D,G,H,I	115. A	154. A	
38. A	77. A	116. B	155. B	
39. D	78. A	117. B	156. C,D,F,G,J	