



Province of KwaZulu-Natal

Operation Sukuma Sakhe

Community Caregiver Foundation Course

Learner Guide

Book 2



STAND UP AND BUILD

Module 4

Infectious Diseases

AIM OF THE LESSON

Lesson 4.1 aims to share information on HIV and AIDS.

Learning Outcomes

By the end of this lesson learners should be able to:

- Show an understanding of the basics of the immune system and how this weakens as HIV infection advances
- Explain the differences between HIV and AIDS
- Explain how HIV is passed on
- Discuss ways to prevent HIV infection
- Identify signs and symptoms of HIV infection
- Show an understanding of the four stages of HIV disease
- Discuss tips on how people with HIV can stay healthy

Lesson Contents

- HIV and AIDS
- Immune system

References

1. Health Systems Trust. Beyond Awareness: Key aspects to consider when dealing with HIV/AIDS: A community perspective. 2001. Available from: <http://www.hst.org.za/print/publications/beyond-awareness-key-aspects-consider-when-dealing-hiv-aids-community-perspective>
2. Southgate, K. Learning about health and common diseases. Juta Learning, Lansdowne. 2006
3. National Department of Health. South Africa. 2008 National Antenatal Sentinel HIV & Syphilis Prevalence Survey. Pretoria

Your role as a CCG

Your role as a CCG is to explain to your clients what HIV and AIDS is and how HIV is spread. You must also make sure that all your clients know their HIV status by going to the clinic for an HIV test.

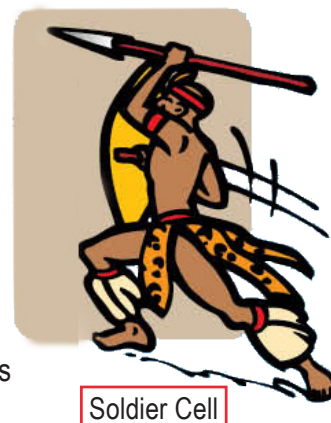
1. What is HIV?

HIV stands for **H**uman **I**mmunodeficiency **V**irus. There are many different types of HIV viruses. The virus needs the human body to multiply and survive. The virus cannot survive in the air so it uses the human body to live in. The virus is called HIV because:

- It infects **HUMANS**
- It weakens the **IMMUNE** system, which is an important system in the body for fighting off infections and illnesses
- It is a **VIRUS**, which is a germ that makes more of itself inside another living cell

2. What is an immune system?

The body has its own system for fighting germs and illness. This is called the immune system. The immune system is made up of many parts. One of these parts is the white blood cells. CD4 cells are a type of white blood cell and they act like soldiers and defend the body against germs that make people sick. HIV weakens the immune system by killing these soldier cells, so that people get sick more often and it also becomes harder to recover. Once in the body, the HIV multiplies quickly by using the CD4 cells. As the HIV continues to multiply, the body responds by producing another type of soldier known as antibodies to fight HIV. This fight makes the immune system tired and weak as more and more of the soldiers are destroyed. At this point the immune system is no longer able to fight off illness and disease. This means that the body is not able to fight off common infections like colds and flu, and the body finds it very hard to recover from these infections.



Only an HIV test can tell if a person has HIV because there are no signs and symptoms when a person is first infected. An HIV test will not be able to pick up the infection within the first three months of being infected. This is called the 'window period'. It is therefore important to be tested for HIV again after three months if the person tests negative the first time [see Lesson 4.2 on HCT].

3. What is AIDS?

AIDS is advanced HIV infection. AIDS stands for **A**cquired **I**mmune **D**eficiency **S**yndrome. HIV infection may progress slowly until the immune system becomes so weak that it no longer works properly to protect the body from illnesses.



Exercise 1

1. What do the letters H I V stand for?

2. What do the words mean?

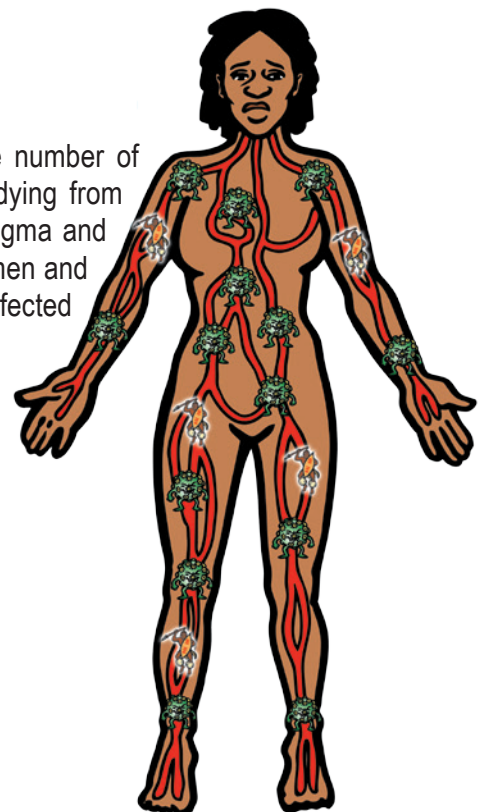
Exercise 2

1. What do the letters A I D S stand for?

2. What do the words mean?

4. HIV epidemic

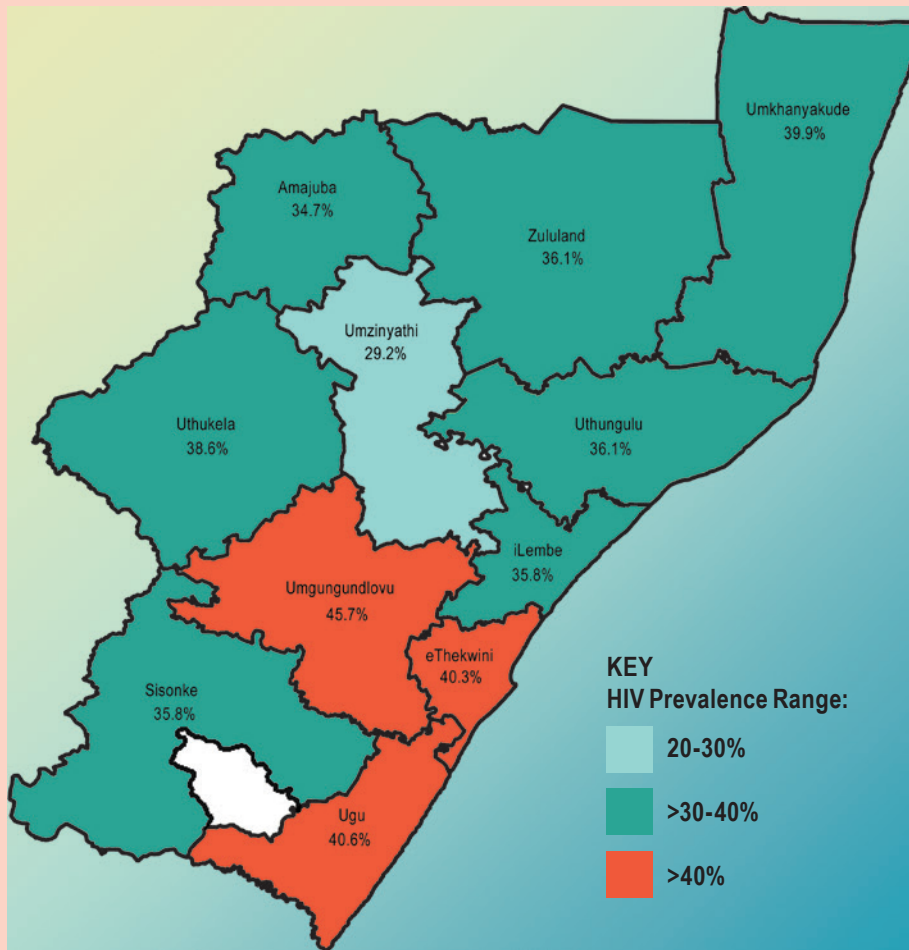
As anti-retroviral (ARV) medicines have become more easily available, the number of people who are taking them has increased. This has led to fewer people dying from AIDS than when HIV and AIDS was first diagnosed [see Lesson 4.12 on Stigma and Discrimination]. There are still more women and girls infected with HIV than men and boys. In our country, young girls between the ages of 15 and 24 years old are affected more than boys of the same age.



Exercise 3

Look at the map. What do you see? What does it mean?

HIV distribution among antenatal women in KwaZulu-Natal by district, 2008.



South Africa 2008 National Antenatal Sentinel HIV & Syphilis Prevalence Survey (Source: South Africa Ministry of Health)

5. HIV transmission

Ways in which HIV infection can happen

1. Having unprotected sexual intercourse with an HIV-positive person: this is by far the most common way in which HIV passes from person to person
2. From an HIV-positive mother to the baby before or during birth, or through breast milk
3. Through contact with HIV-positive blood through open wounds or broken skin
4. Through the transfusion of HIV-positive blood, use of infected blood products, or accidents in the healthcare setting
5. From sharing unsterilised, contaminated drug needles, razor blades and other skin-piercing instruments



Ways in which HIV is not transmitted

Studies of families of HIV-infected people have shown clearly that HIV is not spread through casual contact such as the sharing of plates, mugs and bowls, towels and bedding, swimming pools, telephones, toilet seats, touching, hugging or shaking hands. HIV is not spread by insects that bite humans such as mosquitoes or bedbugs.

The CCG should use the HIV screening tool to check their clients' risk of HIV and encourage them to go for an HIV test.

HIV Screening Tool

Read the following questions to all sexually active individuals and refer them to the clinic for HIV testing if you tick ANY ANSWER in the coloured blocks

	Y=Yes	N=No
1. Have you been tested for HIV in the last 3 months?	Y	N
2. Have you had sex including anal sex without a condom in the last 3 months?	Y	N
3. Have you had more than one sexual partner in the last 3 months?	Y	N
4. Do you suspect that your partner has other sexual partners outside of your relationship?	Y	N
5. Do you use needles or blades that have been used by other people?	Y	N

Note to the CCG:

Please read the following to the client.

- If you have had an HIV test in the last three months and the test result was negative, you and your partner may be in the window period and should return to the clinic for a second HIV test to confirm your HIV status
- If you know your HIV status and you are HIV-positive, then go to the clinic to find out if you qualify for IPT to prevent TB

6. HIV prevention

How can someone prevent themselves from becoming infected with HIV?

They can prevent themselves from getting HIV by:

- Understanding how HIV is spread and taking precautions, e.g. using condoms with all sexual intercourse, abstinence
- Knowing their status and their partner's status and changing their behaviour

Prevention of sexual transmission of HIV

- Abstaining from sex
- Delaying the first sexual relationship as long as possible
- Know their own and their partner's HIV status
- Being faithful to one partner, who is also faithful to them in turn and making sure that both partners are HIV-negative
- Use a male or female condom correctly and consistently every time they have sex [see Lesson 4.10 on Prevention of HIV and STIs: The Role of Condoms]
- Reduce the number of sexual partners
- Visit the clinic early if they think they have a sexually transmitted infection

How to prevent HIV transmission through blood?

- Not sharing needles, blades or syringes with other people
- Ensuring that anything that might puncture the skin is sterilised, e.g. needles and razor blades
- If a healthcare worker has had a needle injury, they need to go to the nearest clinic for treatment that can prevent infection

Preventing mother-to-child transmission

- A woman should plan when she wants to become pregnant. She should talk to the healthcare workers in the clinic about her HIV status [see Lesson 3.1 on Family Planning]
- If a woman wants to get pregnant or is pregnant, she should get tested for HIV. If she tests HIV-positive, she should get advice from the healthcare worker at the nearest clinic on how to become pregnant or manage a pregnancy without putting the baby at risk. She should get treatment for herself and her baby and receive information on the importance of exclusive breastfeeding [see Lesson 4.4 on PMTCT]
- Booking before 3 months (14 weeks) of pregnancy in the Prevention of Mother-To-Child Transmission programme if someone is pregnant and living with HIV [see Lesson 4.4 on PMTCT]

7. The stages of HIV infection

When a person is infected with HIV, they will go through four stages of infection if they do not get treatment for HIV.

Stage 1: Primary HIV infection

During this stage, some people may feel like they have the flu, have swollen glands and can have a rash and headache. But most of the time, persons who have just been infected do not know they are sick. Their immune system will respond to the infection and begin to produce the antibody soldiers to fight the infection. There is a delay between the time a person gets infected and when the antibodies start showing up in the person's body. This is known as the window period. The infection (number of viruses or viral load) in the body is very high during this time; at this stage a person can spread the virus easily if they do not use a condom.

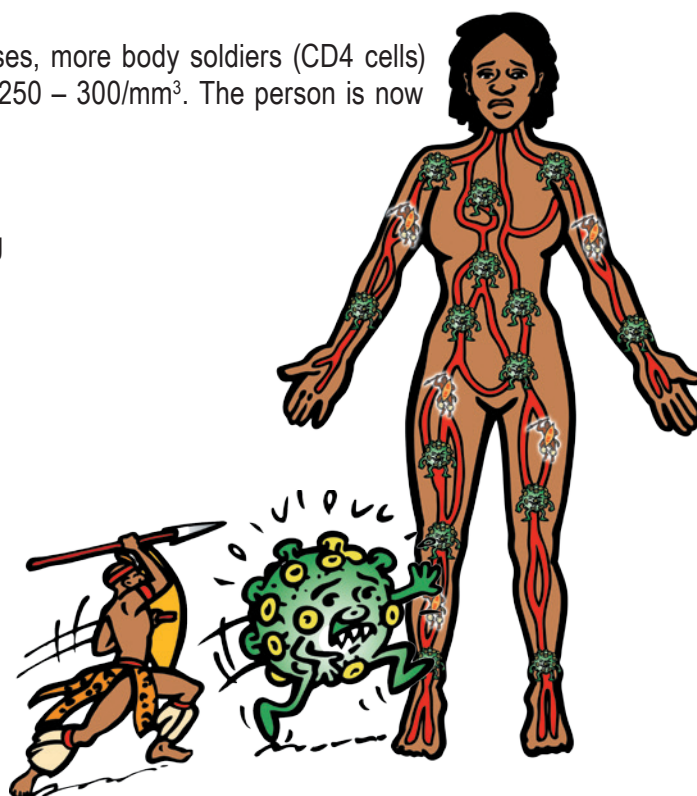
Stage 2: The HIV asymptomatic stage

Asymptomatic means not showing any signs. Once antibodies have developed, the person proceeds from stage 1 to stage 2. During this stage the person looks and feels completely fine and might have no reason to think that they are HIV-positive. The virus is still growing and is beginning to affect the immune system, but the person does not know this. People that know that they are HIV-positive are advised to live a healthy lifestyle to slow down the progression of the disease. This stage can last up to 8 years, but every person is different and most often, this period only lasts 2 – 4 years. The rate of progression of the disease depends on the person's health and lifestyle [see Module 2 on Healthy Living].

Stage 3: The HIV symptomatic stage

During this period, the amount of HIV in the body increases, more body soldiers (CD4 cells) are destroyed. The numbers of CD4 cells drops to about 250 – 300/mm³. The person is now experiencing signs and symptoms:

- Weight loss of more than 10% body weight
- Night sweats
- Stomach cramps, feeling like vomiting or vomiting
- Running tummy that comes and goes
- Fever
- Skin conditions, e.g. rash, patches, pimples
- Cold sores
- Thrush
- Fungal nail infections
- Shingles (Ibhande)
- Severe chest infections
- Muscle aches and joint pain
- Constant swelling in the neck and armpits



Stage 4: Progression from HIV to AIDS

The immune system weakens and infections may occur which weaken the immune system even more. The risk of transmitting the virus is high. HIV disease is now called AIDS. Unless managed with medicines, the risk of dying from opportunistic infections [see Lesson 4.9 on Opportunistic Infections (OIs)] is very high.



8. The signs and symptoms of advanced HIV infection

- Tuberculosis [see Lesson 4.5 on Tuberculosis (TB)]
- Ongoing running tummy
- Severe tiredness and weakness
- Forgetfulness and poor concentration
- Swollen feet
- Pains, pins and needles in the hands and feet
- Skin and other cancers
- Severe headaches (meningitis)
- Severe chest infections
- Opportunistic infections
- Severe weight loss

Handy Hints

Clients should be encouraged to go for an HIV test so that they know their HIV status.

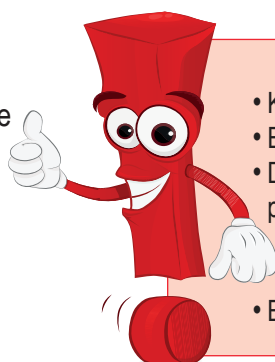


9. Tips to staying healthy with HIV [see Module 2 on Healthy Living]

- Resting and sleeping
- Lowering stress, drinking and smoking
- Eating healthy food
- Exercising
- Keeping busy or starting a hobby
- Strengthening spiritual ties
- Preventing infection by using protective materials, e.g. latex gloves, condoms, disinfectants and using clean (sterilised) equipment
- Talking to family, relatives and friends

Handy Hints

- Keep physically active
- Eat healthy food
- Don't smoke and try not to be with people who smoke
 - Use alcohol responsibly
 - Don't use drugs
- Be safe in sexual activities



Role Play

Group 1: Role play how to educate household members on HIV and AIDS and stages of HIV and AIDS.

Group 2: Role play how to advise a person to stay healthy with HIV.

Group Exercise

**Divide into groups and discuss the following:
(Facilitator to circulate and note questions from groups to be discussed by the larger group)**

1. What is HIV?

2. What is AIDS?

3. What is the difference between HIV and AIDS?

4. Explain how HIV is transmitted.

Group Exercise

5. List ways in which HIV is not transmitted.

6. Describe ways of preventing HIV infection.

7. How does HIV cause illness?

8. What are signs and symptoms of HIV?

Group Exercise

9. Describe the four stages of HIV infection.

10. List the signs and symptoms of HIV.

11. Describe the importance of staying healthy with HIV.

AIM OF THE LESSON

Lesson 4.2 aims to introduce the concept of HIV Counselling and Testing (HCT).

Learning Outcomes

By the end of this lesson learners should be able to:

- Show an understanding of what an HIV test is, and the reasons for having an HIV test
- Explain confidentiality of results of the client's test
- Explain Provider Initiated Counselling and Testing (PICT) and its importance
- Explain couples testing and the importance of testing with a partner
- Explain discordance between partners and what this means
- Explain the process for HCT
- Explain what pre- and post-test and on-going counselling is
- Explain what the results of an HIV test mean
- Explain the importance of disclosing HIV status

Lesson Contents

- Types of HIV tests
- Reasons for having an HIV test
- Confidentiality of HIV tests results
- HIV Counselling and Testing (HCT)
- Couples counselling and testing
- HIV counselling process
- HCT Care Pathway
- What does an HIV-negative test result mean
- What does an HIV-positive test result mean
- Disclosing HIV status

References

1. Health Systems Trust. Beyond Awareness: Key aspects to consider when dealing with HIV/AIDS: A community perspective. 2001. Available from: <http://www.hst.org.za/print/publications/beyond-awareness-key-aspects-consider-when-dealing-hiv-aids-community-perspective>
2. National Department of Health. Khomanani. Caring together for life. South Africa. 2008
3. National Department of Health. National HIV Counselling and Testing Policy Guidelines. South Africa. 2010
4. National Department of Health. Provider Initiated Counselling and Testing. South Africa. 2010
5. UNAIDS. Guidance on Provider-Initiated HIV Testing and Counselling in Health Facilities. WHO. Geneva. 2007 Survey. Pretoria

Your role as a CCG

Your role as a CCG is to explain to your clients what HIV Counselling and Testing (HCT) is; the process and steps involved in HCT as well as the types of HIV tests that are available. You should also discuss the importance of Couple's HIV Counselling and Testing with your clients. You must also make sure that all your clients know their HIV status by going to the clinic for an HIV test, either by themselves or with their partners.

1. What is HIV Counselling and Testing (HCT)

HIV Counselling and Testing includes both Voluntary Counselling and Testing (VCT), which is when someone comes in for a test because they want to know their status and Provider Initiated Counselling and Testing (PICT), which is when the healthcare worker recommends an HIV test when they come for treatment for another illness. Both types require consent to be given by the client.



Handy Hints

HIV testing is free and confidential.

2. Testing for HIV

How would someone know if they have HIV?

It is not possible to tell if someone has HIV or AIDS by just looking at them. They have to take an HIV test.

There are several types of HIV tests available. The most common ones are known as rapid tests and can give the results within 20 minutes. The body makes soldiers, called antibodies, to help fight off infections. These HIV rapid tests find out whether the body has made antibodies because of the HIV infection.

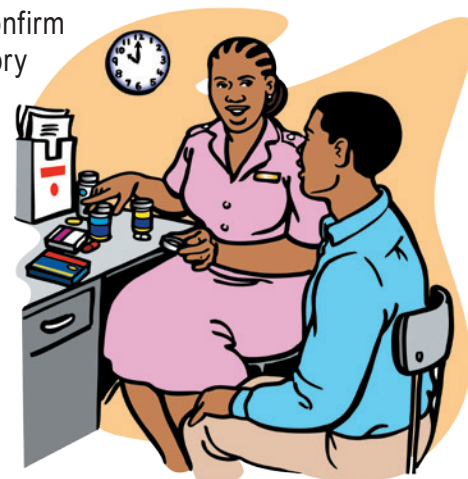


Types of HIV tests

- Finger Prick Rapid test:** This tests blood collected by pricking the finger. It takes about 15 - 20 minutes to get the results. The test is very accurate. If the test gives a negative result, the client should be advised to retest in three months' time. This is because it takes about 3 months to start seeing antibodies in the blood from HIV. There is a delay between the time a person gets infected and when the antibodies start showing up in the person's body. This period of time, when it is possible that someone has HIV, but the test is negative, is called the window period. Re-doing the test in 3 months will confirm that the person is negative. If the test is positive, they will be given a second test to confirm the results

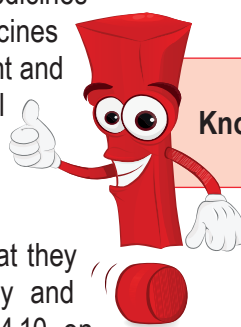


- b. **Oral test:** This is a different type of test that uses saliva to test for antibodies. It is available in some pharmacies. The test involves wiping the gums above the teeth using a special cotton wool swab. This is then tested for antibodies. The result is available in about 20 minutes. If the test is negative, they have to come back in three months' time to retest because of the window period. If the test is positive, a second test will be done to confirm the results
- c. **Other tests:** These are the tests that are done at the clinic to confirm the HIV results. The blood drawn at the clinic is sent to the laboratory
- **ELISA** (Enzyme-Linked Immunosorbent Assay) test is used to test a small sample of blood taken from the arm to see if there are any HIV antibodies. The blood is sent to the laboratory and it may take a few days to get the results back. Clients need to come back to the clinic to get their results
 - **PCR** (Polymerase Chain Reaction) tests will find out if the actual HIV virus is in the blood (and not the antibodies). It is used to test for HIV infection that may have taken place in as little as ten days before the test. It is usually used to test the status of newborn babies



Why should a person have an HIV test?

It is important for a person to know their HIV status for their own health and for that of their partner and family. If they test positive, they can get the care and information that they need to stay as healthy as possible. Testing early and knowing their HIV status will enable people to decide to live a healthy lifestyle with HIV. They will know their HIV status and be able to take necessary actions not to pass HIV to other people. The healthcare workers at the nearest clinic will test them for Tuberculosis (TB) [see Lesson 4.5 on Tuberculosis (TB)] and check whether they have any other illnesses. If they have any of these illnesses, they will be given medicines to cure the diseases. They will be started on ARV medicines at the right time to get the maximum benefit of treatment and prevent their bodies from becoming too weak. They will be put on medicines that prevent infections that occur commonly in persons with HIV.



Handy Hints

Knowledge is power... know your HIV status.

If they test negative, they can take steps to ensure that they remain negative by always using condoms correctly and consistently with their sexual partner [see Lesson 4.10 on Prevention of HIV and STIs: The Role of Condoms] or abstaining from sex. HIV-negative men may choose to be circumcised as it reduces their risk of contracting or getting HIV [see Lesson 4.11 on Prevention of HIV: The Role of Medical Male Circumcision (MMC)].

How could a person have exposed themselves to HIV?

If they have had unprotected sex, shared needles or had contact with someone else's bodily fluids, they may have been exposed to HIV [see Lesson 4.1 HIV and AIDS]. Recommend that they go to the nearest clinic and test for HIV.

Who will know my status?

The test results will be known by the client and the members of the healthcare team such as the HIV counsellors, nurses and doctors looking after the client. They will not discuss these results with anybody else outside the team without the client's permission. It is good for the client to give the healthcare workers permission to talk to the client's partner about their status. Other people will only know the client's status if the client decides to tell them.



Does the test tell what the partner's status is?

The test results will not tell the client what their partner's HIV status is. Each person has to be tested individually to be able to know their status so that they can make decisions on how to protect their health and the health of each other. Encourage clients to go with their partners for testing.

What is couples HIV counselling and testing?

Couples HIV counselling and testing, is when couples undergo HIV Counselling and Testing (HCT) together and learn their HIV test results at the same time. A couple is any two people who are in a romantic or sexual relationship.



Why is it important for partners to get tested together?

Testing together with the partner provides both people with an opportunity to discuss their health and sexual histories in an open and supportive environment. Because they are going through the testing process together and will learn their results together, they do not need to worry about disclosing the results to their partner, or worry about how to get their partners to test. Couples HIV counselling and testing ensures that treatment and care decisions can be made together and that they plan for their future together.

Is it common for couples to have different HIV results?

In countries like South Africa, where there are a larger number of people living with HIV, it is fairly common to find couples who have different HIV results. This is referred to as discordant results. It means that one person is HIV-positive and the other is HIV-negative. For example, if a person who is HIV-negative starts a relationship with someone who is HIV-positive, they will be in a discordant relationship or if two people who are in a relationship are HIV-negative and the one partner has sex outside the relationship and becomes HIV-positive, they will then be in a discordant relationship.

Couples can remain discordant for a long time; as long as they make sure they take the right safety steps by practicing safer sex, using condoms each time they have sex and taking their medicines against HIV if they are on them. The risk of passing on HIV is highest in discordant couples who do not take steps to protect themselves, such as using condoms, and those where the HIV-positive partner is not taking medicines against HIV.

What are the advantages of couples HIV counselling and testing?

- The setting is safe for couples to discuss their concerns because the session is run by an experienced counsellor
- Partners hear information and messages together and so it is easier to make sure that both of them understand the messages
- The counsellor has the opportunity to ease tension and help partners not to blame each other
- Counselling messages are based on the HIV results of both individuals
- The individual will not have to worry about disclosing their results to their partner and they will not have to try to get their partner to test
- Treatment and care decisions can be made together
- The couple can make decisions together for their future particularly if they are planning to have children
- It is difficult for couples when one partner is HIV-negative and the other is HIV-positive. It often affects the commitment to their relationship; a counsellor can help by providing relationship advice
- Being counselled together will help couples talk to each other about their worries and will help them work together to make sure that the person who tested HIV-negative stays that way



3. The process of getting an HIV Test

Before being tested for HIV an individual needs to go to a pre-test information session, which may be conducted with groups, couples or individuals. This information session must be followed up with an individual session (normally referred to as pre-test counselling). All sessions should be conducted in the language the client understands. An HIV test will then be offered and performed providing the client agrees. Regardless of the outcome of the HIV test, all clients should then receive post-test counselling.

a. Group information pre-test session

A healthcare worker like the HIV counsellor or the nurse should conduct the group information pre-test session, which should cover the following topics:

- Information about how a person can get and pass on HIV
- Information about how to prevent getting and passing on HIV, including consistent and correct use of condoms, staying faithful to one partner and other ways to have safer sex
- Emphasis on the importance of early HIV testing
- Information about the HIV testing process
- Discussion on how to keep the results of the HIV test confidential between the client and the healthcare workers (confidentiality)
- The importance of pregnancy screening [see Lesson 3.3 on Antenatal Care (ANC) for the Pregnancy Screening Tool]

- The importance of TB screening during pre-and post-test counselling [see Lesson 4.5 on Tuberculosis (TB)]
- Referral to HIV and AIDS-related services such as nutritional advice [see Lesson 2.2 Healthy Eating], STI screening [see Lesson 4.8 on Sexually Transmitted Infections (STIs)], CD4 cell count test, Opportunistic Infection management [see Lesson 4.9 on Opportunistic Infections (OIs)] and pregnancy screening [see Lesson 3.3 on Antenatal Care (ANC)]
- Group information pre-test session and
- Pre-test individual counselling discussion

b. Individual pre-test counselling session

The individual counselling session should include the following:

- The nurse or counsellor should check whether the information provided in the group session has been understood
- Opportunity for the client to ask questions if there is anything they don't understand
- The nurse or counsellor will help the person to decide what their risk of HIV is
- The nurse or counsellor will explain that there is anti-retroviral treatment for HIV that will allow a client to live a normal life as HIV can be treated like any other chronic disease
- Obtaining informed consent for HIV testing
- A discussion on how to lower the risk of getting HIV if the result is negative
- An explanation of the window period and the need for repeat testing if the client is HIV-negative
- If the client has tested HIV-positive, they should get advice on how to stay healthy. This will include:
 - Being checked for TB
 - Checking what stage their HIV infection is at [see Lesson 4.1 on HIV and AIDS for more information on the stages of HIV infection]
 - Having their CD4 cells measured, through a blood test (CD4 cell count test)
 - Having a discussion about ARV medicines
 - How to keep healthy, through following a healthy diet, exercising, not smoking or using drugs
- Discussion on partner involvement and the importance of partner testing
- TB screening, by asking questions that will tell whether or not the client has signs and symptoms of TB [see Lesson 4.5 on Tuberculosis (TB)]



What is post-test counselling?

All clients, regardless of the outcomes of their HIV test, should receive post-test counselling. The counsellor will discuss different issues depending on the results of the HIV test.

HIV-negative test result

If the client's HIV test is negative, the post-test counselling session should include:

- A discussion around what an HIV-negative test result means
 - It could mean that they are not infected with HIV at that time
 - Their result may be negative because they are in the window period and it is too early to detect HIV antibodies
 - Therefore, they should return for another HIV test in three month's time, making sure they do not expose themselves to HIV during this time
- Advice about how they make sure that they stay negative
 - The importance of always using a condom correctly and consistently every time they have sex
 - Reducing the number of sexual partners
 - The benefits of Medical Male Circumcision (MMC) for men
 - The importance of knowing their partner's status and encouraging their partner to test for HIV. A person's negative result does not mean that their partners are HIV-negative

HIV-positive test result

If the client's first test result is positive they will be given a second rapid test to confirm their test result. After being tested they will then receive post-test counselling.

At the post-test counselling session the counsellor should:

- Explain again that a positive HIV test result means the client has HIV
- Reassure the client that they will feel as if it isn't happening to them (denial) or be angry or sad and worried about the future. This is a normal reaction. The counsellor should advise the client where they can get further support, e.g. on-going counselling, how to join a local support group, and support of family and friends to cope with these feelings
- Explain the importance of accepting help as this could have a positive impact on adherence to treatment and later on when making healthy lifestyle choices
- Advise on the importance of going to a clinic for a CD4 cell count test immediately and thereafter, going for all scheduled clinic visits. The CD4 cell count test is important because it helps tell how strong the immune system is; it shows how far advanced the HIV infection is; it helps the healthcare workers decide whether to start treatment and shows how the client's HIV infection may progress
- Advise on how to adopt a healthy lifestyle as soon as possible by eating healthy foods, avoiding alcohol, stop smoking, not using drugs, getting exercise and rest [see Lesson 2.2 on Healthy Eating]



- Advise on how not to spread HIV to their partner by ensuring that they use a condom every time they have sex [see Lesson 4.10 on Prevention of HIV and STIs: The Role of Condoms]
- Advise on the importance of getting their partner to test for HIV
- Advise on the importance of getting a TB test. The counsellor will use a TB screening tool to ask them questions to check if they may have TB [see Lesson 4.5 on Tuberculosis (TB)] and will refer them accordingly
- Explain the importance of checking if a woman is pregnant and enrolling in the Prevention of Mother-To-Child Transmission (PMTCT) programme if they are pregnant. The counsellor will ask questions to check if the woman could be pregnant and refer her accordingly [see Lesson 4.4 on Prevention of Mother-To-Child Transmission (PMTCT)]
- Explain the importance of disclosing their status to their partner, family and possibly friends and the benefits of looking for help from support groups and other organisations

After post-test counselling all HIV-positive clients must be referred for a CD4 cell count test. The CD4 cell count test result, together with a clinical examination, which is done by healthcare workers to see how far the HIV infection has gone and how the client should be treated, will determine if the client will be started on ARV therapy. The National Department of Health has set guidelines for the prevention and treatment of HIV and AIDS. These guidelines include what the client's CD4 levels need to be to qualify for anti-retroviral (ARV) treatment. Those who qualify for ARV therapy should be started on ARVs. Those who do not qualify on ARV therapy yet must continue going to the clinic every six months to have a CD4 cell count test to see if they qualify.

They must also be screened for symptoms of TB and referred for TB tests if it is suspected that they may have TB or they may need to be put on TB preventative therapy [see Lesson 4.5 on Tuberculosis (TB)].

HCT Care Pathway

Note to the CCG:

Please show and read this HCT Care Pathway to all clients that you refer for HIV testing.

1 Motivation to test

By knowing your HIV status (taking an HIV test) you will be able to protect yourself and your partner and take better care of your health



2 Testing venues

You can test at the following venues:

- Local clinic
- Hospital
- Community testing campaigns
- Other testing sites, e.g. selected pharmacies



3 At the testing venue

- You will receive group education to help you understand HIV and the testing process
- You will receive individual counselling before and during the test
- You will be asked questions to check your risk for TB and a sputum test if necessary
- You will be screened for pregnancy (for women)



4 The test

- Your finger will be pricked and blood will be taken for testing
- You will receive your test results within 20–30 minutes
- While waiting for the results, you can ask questions about HIV or any other related topics



6 Retest after three months

Retest after three months. You will receive information about staying HIV-negative including how to practice safer sex, condom use, medical male circumcision



5 Post-test counselling

You will:

- Receive counselling on your test results
- Receive information about staying HIV-negative, how to practise safer sex, e.g. condom use, medical male circumcision
- Receive counselling on couples testing
- Be told to return for another HIV test after three months as you may be in the window period



HIV-negative

If you test HIV-negative, you should be screened for high risk behaviour



HIV-positive

If HIV-positive, you will receive a second test to confirm your status

6

Based on your CD4 cell count test result, you:

- Will be educated on how to live a healthy lifestyle
- May start ARV therapy
- Will be given other preventative medicines if you qualify and you have not received them
- Will be given an explanation on HIV clinical staging



5 Post-test counselling

You will receive:

- Counselling
- Information about living with HIV and living a healthy life
- Condoms
- A CD4 cell count test
- Support group details
- IPT treatment, if you qualify, to protect you against getting TB

Return after one to two weeks for your CD4 cell count test result

Abbreviations:

TB	–	Tuberculosis
PICT	–	Provider Initiated Counselling and Testing
IPT	–	Isoniazid Preventative Therapy
ARV	–	Anti-retroviral

4. Disclosing HIV status

How can a person with HIV cope with their feelings?

Learning that a person is living with HIV is life-changing and can be very difficult. Having feelings of hopelessness, anger, fear, depression, sadness and anxiety are all very common. It is important that at a time like this they go to people they trust for support.

At the beginning they might find it easier to speak with their counsellor or to join a support group for people living with HIV. Once they have dealt with their own feelings and emotions, they should consider telling someone they can trust, be it a friend or family member, so that they can gain that extra support. They should turn to the person they normally share their deepest secrets with as they obviously trust them a great deal. The most important thing is to find ways to talk to their partner and to get them to test. People living with HIV are afraid of being rejected or treated unfairly or badly [see Lesson 4.12 on Stigma and Discrimination] that may result from disclosing their status. However, as more people test and disclose their status, they are more readily accepted by family, friends, workplace colleagues and society. Making the decision to disclose one's HIV status can be a difficult decision, which needs careful thought. They need to think about the following:

- Have they accepted and understood what it means to be HIV-positive?
- Who are they going to tell?
- What should they tell them?
- When should they tell and where?
- Consider the benefits of telling the right person
- What will they do if people do not respond kindly?



Who is the right person to disclose to?

Before disclosure to a person, these questions should be asked:

- How can this person support them?
- How will they respond when they are told the news?
- Can they be trusted not to tell anyone else if they are asked not to?
- Can this person be relied on to give them the help and support that they need?
- Does this person care about what being HIV-positive means to the HIV-positive person?
- How did they deal with other problems they might have told them about in the past?
- What do they hope to get out of telling this person?



Module 4 Infectious Diseases

4 Lesson 4.2 HIV Counselling and Testing (HCT)

Case Study

Nontu and Nkosinathi have been for couples counselling at the clinic. Nkosinathi was treated for an STI. During the counselling he admitted that he had a girlfriend in Johannesburg. Nkosinathi is HIV-positive and Nontu is HIV-negative. They did not understand what this meant when the healthcare worker explained this.

Nkosinathi is scared to tell his girlfriend.

Role Play

Divide into groups and role play the following:

1. Explain what discordant results mean to the couple.

2. Explain what this means for their sexual relationship in the future (use of condoms, etc.).

3. Help Nkosinathi to practice disclosing to his girlfriend when she reacts positively.

4. Help Nkosinathi to practice disclosing to his girlfriend when she reacts negatively.



AIM OF THE LESSON

Lesson 4.3 aims to share information on Anti-Retroviral Therapy (ARVs).

Learning Outcomes

By the end of this lesson learners should be able to:

- Show a basic understanding of ARVs and how it works on the immune system
- Explain who should start ARVs
- Show an understanding of common side effects of ARVs
- Show an understanding of the importance of staying on treatment and buddy support
- Explain what missed doses are
- Show an understanding of the effects of traditional medicine on ARVs
- Explain what resistance is and describe how to prevent this
- Explain why it is important to diagnose HIV in children as soon as possible
- Explain when a child should start ARVs and common side effects in children
- Show an understanding of the importance of having more than two caregivers checking up on the ARV adherence for Orphans and Vulnerable Children (OVCs) and how to make sure that children stay on their ARV treatment

Lesson Contents

- Anti-Retroviral Therapy
- Treatment adherence
- Resistance to ARVs
- ARVs in children

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Your role as a CCG

Your role as a CCG is to understand and explain to your clients about the importance of anti-retroviral therapy in the treatment of HIV. You should also discuss with them the need to take the medicines exactly as prescribed by the healthcare workers. You should also use the opportunity to talk to your clients about making sure that they know their HIV status and refer them to the clinic for an HIV test.

1. What is ARV therapy?

ARVs, also known as anti-retrovirals, are medicines used to help manage HIV infection. The best way to fight HIV is by treating it with more than one ARV medicine at a time. This is known as combination therapy. A combination of three or four ARV medicines is called Highly Active Anti-Retroviral Therapy (HAART). These medicines may be available as a fixed dose combination, which is a single tablet that contains a combination of ARVs. ARVs against HIV have to be taken at the same time, everyday, for the rest of the person's life.

- If someone is infected with HIV the virus will always be in their body, even if they are being treated with ARVs. The medicines available now do not cure HIV, but stop the HIV virus from multiplying in the body and therefore keep the client healthy
- ARVs can improve the health of clients and clients with HIV are able to lead a normal and productive life [see Lesson 4.1 on HIV and AIDS for more information on tips to staying healthy with HIV]

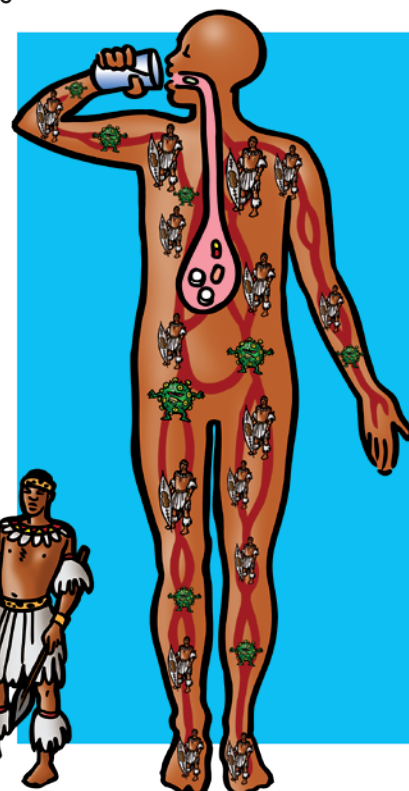


How does ARV therapy work?

ARV therapy helps to keep HIV under control by stopping the HIV virus from multiplying and growing in the body. This helps the immune system to recover, making it able to fight infections that may occur and allows the body to recover from any damage that the HIV might have already caused.

2. When should ARV therapy start?

The decision to start treatment will be made once the client's CD4 cells have been measured and they have been checked by a doctor or a nurse. Healthcare workers can measure the client's CD4 cells with a simple blood test.



A CD4 cell count test tells the healthcare worker whether the client's immune system is healthy or weak. The sooner the client has an HIV test, the sooner the healthcare workers will be able to determine if the client needs to start ARV therapy, so clients should be encouraged to have an HIV and know their status as soon as possible.

Healthcare workers will look at the following factors before starting an adult or teenagers from 15 years and older on ARV therapy if:

- The CD4 cell count as stated in the National Department of Health HIV and AIDS guidelines (refer to the ARV qualification criteria)
- There is an AIDS-defining illness, like pneumonia, they may be started on ARVs while they are waiting for the CD4 cell count test result
- A woman is HIV-positive and pregnant, ARVs will be started to protect the baby from getting HIV in the womb
- They have TB and the CD4 cell count as stated in the National Department of Health guidelines
- They have TB, MDR or XDR-TB, they will be started on ARVs no matter what the CD4 cell count is



Some other factors may be important to determine if someone will do well on ARVs, because the person will have to take them every day of their life. Some of these are:

- How much alcohol do they drink?
- Have they told (disclosed) their HIV status to their family members/partners?
- Are they able to attend all clinic visits?
- Do they have a treatment supporter (someone to help them with taking their tablets)?
- Do they have a history of not taking medicines correctly, e.g. a previous TB treatment that they did not finish?
- Do they have a history of recreational drug use?

Usually, a combination of different ARV medicines will be given to people living with HIV and AIDS. Not everyone starts on the same types of medicine; it depends on each individual case. However, at the beginning of the treatment, the combination of drugs that any person is given is called first-line therapy. If after a while the HIV stops responding to this combination of drugs, or the side effects are particularly bad, then a change to new or different medicines may be made. If the person would like to learn more about the different medicines ask them to speak to the healthcare workers at their local clinic.



ARV Therapy Care Pathway

Note to the CCG:

Please show and read this ARV Therapy Care Pathway to all clients who have tested HIV-positive or who are on ARVs.

1 HIV counselling and testing

You should receive:

- Post-test counselling after you have your HIV test
- If you have tested HIV-positive, information on living with HIV and how to stay healthy (including condoms)
- Details of support groups

Please refer to the HCT Care Pathway for the complete counselling and care that you should receive



2 Getting a CD4 cell count test and other screening

As you have tested HIV-positive, you will:

- Receive a CD4 cell count test
- Be asked questions to check your risk for TB and a sputum test if necessary
- A pregnancy test (for women)



3 Qualifying for ARVs

You will be started on ARVs based on your CD4 cell count test results, a clinical examination and any OIs, e.g. TB that you may have. If your CD4 cell count is above what is stated in the guideline, you will have to have a CD4 cell count test every six months

4 ARV education

You will receive education on the importance of and the need for taking your ARVs exactly as prescribed by the healthcare workers



7 Taking ARVs

Take ARVs at the same time every day for the rest of your life even after you start feeling better. (Together with your treatment buddy try to find ways so that you don't forget, e.g. set an alarm on your cell phone)



6 Visit to doctor/nurse to start ARVs

If you qualify to receive treatment you will visit the doctor/nurse to collect your medicines to start treatment



5 Preparing for treatment

You should:

- Disclose to family
- Find a treatment buddy
- Join a support group in your area

8 Monthly visits

- Visit the clinic to collect ARVs and for a check-up as advised
- If you take your ARVs exactly as prescribed you will be placed in a Speed Queue to collect your medicines



9 Follow up visits

Ask the healthcare workers at the clinic when you will need to have follow up tests done



10 Adherence

Continue taking ARVs as prescribed every day for the rest of your life, even when you feel healthy again



Abbreviations:

ARV – Anti-retroviral

HCT – HIV Counselling and Testing

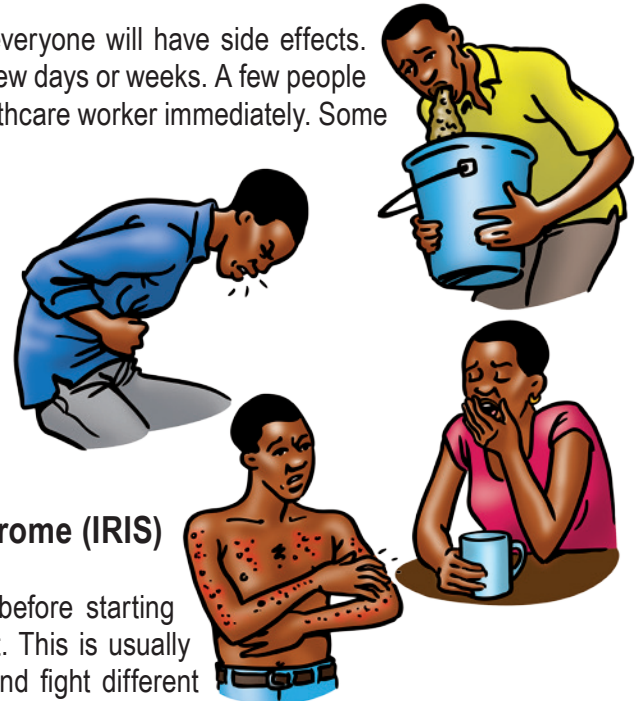
OIs – Opportunistic Infections

TB – Tuberculosis

3. What are common side effects?

Some people taking ARV therapy may have side effects. Not everyone will have side effects. Some side effects are not severe and will often go away within a few days or weeks. A few people may have severe side effects which they must report to their healthcare worker immediately. Some of the serious side effects are:

- Constantly feeling like they want to vomit (nausea)
- Vomiting or diarrhoea
- Difficulty in breathing
- Severe pain in the stomach
- Constantly not wanting to eat
- A skin rash that appears all over the body
- Tingling, numbness, burning pain or loss of feelings in the hands and feet



What is Immune Reconstitution Inflammatory Syndrome (IRIS)

Sometimes when a person's immune system was very weak before starting ARVs, they can get quite sick in the first 3 months of treatment. This is usually because the ARVs are helping their immune system recover and fight different types of illnesses. Some of the likely symptoms are diarrhoea, fatigue, fever, cough that doesn't go away, vomiting and weakness. If someone has IRIS, which normally lasts up to three months, it does not mean that their ARV therapy is not working properly. It is important that they go and see their healthcare worker straight away and tell them if they are suffering from any of the symptoms described.

4. How can a person find out more about ARV therapy?

There are lots of people who can give advice about where to get ARV therapy and how the treatment works. These include:

- The local hospital
- The client's doctor/healthcare worker
- The clinic
- The local HIV support group
- Internet



5. Why is it important for a person on ARV therapy to stay on their medicines?

How long will a person be on ARV therapy?

ARV therapy is a commitment for life. In order for the ARV therapy to work properly, people must make sure that they take all the medicines exactly as prescribed by the doctor or healthcare worker at the same time, every day, for the rest of their lives.

What is ARV adherence?



Handy Hints

TAKE ACTION!

A person should speak to their healthcare worker if they are not sure how to take their medicines or if the ARVs they receive look different to the usual medicines they take.

In order for ARV therapy to work properly, people must take all the medicines exactly as prescribed by their healthcare worker at the same time, every day, for the rest of their lives. This is called adherence or adhering to treatment. If someone stops taking all, or even just one of the medicines, or forgets to take a dose, they are at risk of the HIV developing resistance to the medicines – this will enable the HIV to come back and grow quickly again in their bodies.



Handy Hints

The client should use condoms every time they have sex even if they are on ARV therapy.



What to do if a person forgot to take one of their doses of ARVs?

A person must take their missed dose as soon as they remember and take their next dose 12 hours later. For example, if they were meant to take their ARVs at 08:00, but only realised that they forgot to take them at 11:00 they should take the missed dose immediately (i.e. at 11:00) and then the next dose at 23:00. If they have missed a dose it's important that they speak their healthcare worker as soon as possible so that they can come up with ways to remember to always take the medicine. If a person has changed their schedule, they must stick to their new schedule. **They must never take two doses of ARVs at once.**

Why would somebody stop taking their ARV therapy?

There are a number of factors that could prevent a person from taking their ARV therapy every day:

- **Disclosure:** Some people do not want to let people know that they are living with HIV and taking ARVs. This means that they have to hide and take their medicines secretly, making it easier for them to miss doses. Also, they will not have anyone to support them if they have side effects
- **Not taking ARVs correctly:** Not understanding which tablets to take and when to take them. It is the client's responsibility to ask the healthcare worker or pharmacist as many times as necessary which tablets should be taken when and how to take them. They should only take advice from their healthcare worker on how to take their medicines
- **Not having access to ARV therapy:** Some people do not have reliable access to ARV medicines because of many reasons including transport issues or simply being too sick to collect their medicines. This is why getting help from a family member or good friend is important
- **Starting a new routine:** Adhering to treatment needs a new behaviour or habit to be formed. Some people don't work regular hours or follow regular routines, e.g. people who do shift work from time to time. Most people find it difficult to get into a new routine in order to take their medicines at the same time, every day. Therefore planning and getting support is very important
- **Alcohol/substance abuse:** Too much alcohol or drugs can affect a person's memory, making them forget to take their medicines or taking them incorrectly. Alcohol may also interfere with how well their ARVs work
- **Traditional medicines and religious rituals:** Certain practices such as the habit of forcing themselves to



vomit may interfere with ARVs working in the body and therefore affect a person's adherence levels

- **Social grants:** Sometimes people stop taking their medicines on purpose. This is so they can collect the social grant that gets paid to people who are sick and have a low CD4 cell count
- **Peer pressure:** People should be careful of opinions and incorrect information given by friends and family and even traditional leaders. They should always speak to their healthcare worker if they have any questions or concerns about their ARV therapy
- **Side effects:** ARVs can cause side effects that can make someone not want to continue taking them. These can be:
 - Diarrhoea
 - Headaches
 - Weakness
 - Stomach pain
 - Tiredness, numbness, tingling or burning in the hands and feet
 - Nightmares and tiredness

ARVs should not be stopped even if side effects develop. If a client experiences side effects, they should contact their healthcare worker and get advice on what to do.

Tips to improve adherence

Here are some simple tips to help someone remember to take their medicines every day – especially in the first few months of starting treatment:

- Set an alarm clock or cell phone alarm
- Have a friend or family member to remind them, maybe through a phone call or sending an SMS
- Pill boxes or making their own pill boxes by putting the morning and evening dose in a medicine packet so they will always know if they remembered to take the dose
- Link taking their medicines to something that they do routinely every day, such as brushing teeth, making a morning cup of tea or getting dressed
- Put the medicine in a place where they will always see it – but away from direct sunlight, moisture and the reach of children
- Always carry extra doses of ARVs with them in case they are away from home or out visiting family and friends
- Ensure that each child has at least two, if not three, caregivers who know the child's medicines and who can make sure that they are taking them properly



This screening tool will help the CCG find out if their client is adhering to their ARVs exactly as prescribed by their doctor.

If the client answers 'Yes' to the question, they must be referred to the clinic immediately and the CCG should follow up

ARV/TB Adherence Screening Tool

Read the following question to clients on ARVs/TB medicine and refer them to the clinic if the answer is 'YES'

Y=Yes

N=No

1. Have you missed two or more doses of your medicine in the past month?

Y

N

to make sure that the client has gone to the clinic.

6. What is ARV drug resistance?

Drug resistance occurs when a virus changes and is able to change, grow and multiply even with the drugs that usually kill or suppress it. Drug resistance is when a virus learns to protect itself against a medicine. This can occur for many reasons, but mostly happens if someone does not take their medicines correctly every day exactly as prescribed by their healthcare worker. Not taking ARVs exactly as prescribed can lead to drug resistance and possibly death. Drug resistance can also occur if both the partners are HIV-positive and are having unprotected sex. This can result in re-infection of HIV with a different type of HIV which is resistant to the current ARV medicines.

How to prevent drug resistance from happening?

Steps to avoid drug resistance:

- The first set of ARV medicines a client takes may be their best chance to stop the HIV virus multiplying and prevent drug resistance from taking place. If they are put on the first set of ARV medicines then they should do their best to stick to it by taking their medicines exactly as prescribed by their doctor
- Always take the medicines exactly as prescribed. Missing doses, not taking the right number of pills and not taking them at the right time, can lead to drug resistance
- A good relationship with the healthcare worker can help with all of this. Clients should talk with their healthcare worker honestly. They should ask questions; talk about any problems they are having; and tell them everything they are taking, including over-the counter medicines, traditional medicines, and any other legal or illegal drugs
- Medicines should not be shared with others even if they are on the same treatment as the client
- It is important not to mix up the tablets – clients should know which tablets to take and when to take them

How to know if the ARVs are working?

Viral load testing (a test to check the amount of HIV in the blood) is the best way to tell whether the treatment is working. Once a person has started on ARVs they should have their viral load checked twice in the first year and then once a year for the rest of their lives.

The viral load should reach very low or undetectable levels, which means the viral load has become so low that it cannot be picked up on a blood test, within six months or less after starting treatment. If a very low (undetectable) viral load becomes high (detectable) and continues to go up while the person is still on ARVs, it is a sign that:

- They may not be taking their medicines properly
- The medicines may not be working properly for them

A detectable or increasing viral load does not necessarily mean that drug resistance has occurred, but it could mean that they are at risk of developing drug resistance because the HIV is increasing even though they are taking their ARVs. It is important that the healthcare worker does tests to find out exactly why the viral load is increasing.



7. Will traditional medicines affect ARV therapy?

People should make sure that they tell their healthcare worker that they are taking traditional medicines and make sure they tell their traditional healer that they are taking ARVs. There may be some natural or herbal remedies that won't work with the ARVs. It will be even better to bring a sample of exactly what traditional medicines they have been taking to show them to their healthcare worker.

8. What is a buddy or support person and why are they important?

To help people adhere to their ARV programme, encourage them to choose someone, or a few people, with whom they have a special relationship, someone who lives with them or close by; someone who can help them with their medicines and general health and well-being. This person is called a buddy or support person. Choosing the right buddy is very important because, having to take many medicines at the same time of the day, every day for the rest of their lives, is easier to do if they have help.

The buddy or the people giving them support should learn about the ARVs they are taking and help them take them the right way, each and every time. They can help them to remember when to take their pills, feel good about taking pills and help them go to all their visits at the clinic. The buddy will need to be able to give up their time to go with them to the clinic. The buddy can also help around the house if they are feeling sick or if they are suffering from side effects from the ARVs. Sometimes they may just need someone to talk to about their feelings and a buddy can be this person.

When choosing their buddy or support person, they must avoid a person who does any of the following:

- Drinks alcohol excessively
- Takes harmful drugs
- Is on ARVs, but does not take them properly
- Lives far from them or travels a lot



It is recommended that everyone have a buddy, however nobody will be refused treatment if they don't have a buddy. The buddy can also be another way for the healthcare workers at the clinic to contact the client. It is important for the client to introduce the buddy to the healthcare workers at the clinic and for the buddy to leave their contact details at the clinic so that the healthcare workers can use these contact details to reach the client if they need to talk to the client urgently and are having problems getting hold of the client.

Children and ARVs

9. Why is it important to diagnose HIV in children as soon as possible?

About half of the number of children who are born with HIV will die before they are 18 months old, if they are not treated. It is therefore very important to diagnose a child living with HIV as soon as possible. This is because if left for too long, it may be too late for ARVs to work properly. Children with HIV, therefore, need to be identified as early as possible, before they become sick, so that they can get the correct medical care.

When will a child start ARV therapy?

- In South Africa, for children above the age of one, certain factors are taken into account before starting ARV therapy:
 - The stage of HIV disease (how sick is the child?)
 - Age of the child
 - Weight of the child
 - The child's CD4 cell count
- If a baby under one year of age is diagnosed as HIV-positive after a PCR test, (this is a blood test done when the baby is six weeks old if the mother is HIV-positive) they should be started on ARVs immediately [see Lesson 4.2 on HIV Counselling and Testing (HCT)]

Which side effects are common in children?

Children normally react very well to ARVs. However, some may have the following side effects:

- Diarrhoea
- Nausea
- Rash
- Vomiting
- Wheezing (when it's difficult to breathe)

If a child suffers from side effects, they should immediately be taken to see a healthcare worker but the ARV treatment should not be stopped at home.



Is adherence a problem for children on ARVs?

Adherence in children is difficult because small children can't take medicines on their own; they depend on their parents and caregivers. Unless a child is given medicines exactly as prescribed by the healthcare worker, it is likely that the

ARVs will not work.

What does the caregiver need to know about giving the medicine correctly?

1. The caregiver needs to know how to use a syringe and how to measure the exact amount of medicine to give the child
2. They should practice in front of the pharmacist, counsellor or healthcare worker and ask them if they are doing it correctly
3. They should remember to always keep the syringe clean and rinse it just after use
4. It is important to remember that the medicine doses will change as the child grows and as the weight of the child changes. It is important that a child is weighed every month
5. Do not share the syringes or medicines with other children

10. What are some of the factors that cause poor ARV adherence in children?

There are a number of things that can cause children not to take their medicines properly:

- Having a caregiver who does not know how to give the medicines correctly
- Incorrect dosing – giving the wrong amount of medicine to the child
- The high number of medicines that need to be taken every day may cause the caregiver to be confused
- Young infants not wanting to take some syrups and powders because they have a bad taste
- Caregivers not wanting to tell schools and care-centres that their child is infected, which can lead to them missing out on doses
- Side effects of the medicines
- Not telling the family about the child's HIV status also adds to non-adherence. In some settings, mothers do not disclose the status of their child/children to any other family members

Why is it important to have more than two caregivers check the ARV adherence for orphaned and vulnerable children (OVC)?

Orphaned children and children living in child-headed or granny-headed households are at higher risk of non-adherence. These children are troubled with caring for other members of the family or the granny may have many children to take care of at the same time. These children may not understand the importance of adherence. When left on their own they often forget to take the medicines at the correct time and miss their doses. To avoid this, it is advisable to find caregivers from the community who can help the children and who can be trusted. The caregivers can be community healthcare workers, social workers or simply neighbours. It is best to have at least two or more people who clearly know what needs to be done and the correct dosage for each child so that there is always someone available to help the child. It would be useful for the caregivers to attend the clinic with the child, so that they know what they have to do and can help the child with his or her medicines.



Illustrated Guide on How to Administer Liquid Medication to Children

It is important to know:

- The name of each medicine
- When and how often to give
- How much to give of each medicine (this may change at almost every visit)

ENSURE: that the exact amount is given each time

1 The amount of medicine to give appears on the container label or the doctor may prescribe the dose

2 A dropper or syringe can be used



- 3** If the label states, for example, to give 2mℓ you will do as follows:
- a. Place the tip of the syringe/dropper in the liquid medicine
 - b. When the syringe is used, draw the liquid until the plunger is in line with the correct number. When a dropper is used, squeeze and release the soft rubber squeezer for the liquid to be drawn up into the glass tube
 - c. If using the syringe, hold the syringe with the tip pointing up. Flick the syringe to move any bubbles in the liquid towards the tip – then push the plunger to remove the bubbles. Should a dropper be used, squeeze the rubber to release drops until the required amount is in the glass tube
 - d. Repeat steps 1 and 2 if necessary

4 Never mix medicines in a syringe

5 Give this amount to the child in their mouth, e.g. 2mℓ



What do I do if the child vomits after taking the medicine?

- If the child vomits within 30 minutes of giving the medication, give it again
- If it happens after 30 minutes do not give it again until the next dose

What must I do if I forgot to give the medicine?

For 12 hourly doses:

- If you remember within 6 hours give it
- If it is more than 6 hours – skip the dose

For once daily doses:

- If you remember within 12 hours give it
- If it is more than 12 hours – skip the dose

NEVER GIVE A DOUBLE DOSE!

How can a health educator, community caregiver, HIV counsellor, help children adhere to their medicine?

- Spend time with the caregiver or child to explain why they need the treatment, and the need for life-long adherence
- Discuss a plan with the child or caregiver that they can understand which will help the child to take the medicines correctly, and to which they commit
- Teach the caregiver how to give the medicines properly and at the correct dose; how to measure and prepare the correct dose of the medicines and the time of day that the medicines should be given
- Encourage disclosure to family or friends who can support the plan
- Inform both the child and the caregiver of possible side effects
- Provide tools to help the child adhere to their ARV medicines, where available, e.g. written calendar of medicines, pill boxes
- Encourage use of alarms or other items to help the child adhere to their medicine
- Link schedules to daily activities such as mealtimes and brushing of the teeth
- Provide the caregiver with tips on how to encourage the child to take their ARVs, e.g. after taking their ARVs give the child a spoonful of peanut butter, juice, jam or sugar to help hide the bitter taste of the medicine
- Check side effects and encourage the caregiver to discuss the side effects with a healthcare worker
- Develop and encourage links with community-based organisations to support adherence



Role Play

Role play in groups of two, how the community caregiver would negotiate with an adult and child, to take their ARVs.

Exercise

Answer the following questions:

1. What is ARV therapy?

2. How does ARV therapy work?

3. When should someone start taking ARVs?

4. What are the common side effects of ARVs?

5. What is ARV adherence?

Exercise

6. Why is it important to have someone to support the client when they are on ARVs?

7. What is resistance to ARVs?

8. How can a person avoid developing resistance to ARVs?

9. Why is it important to diagnose HIV early in children?

Exercise

10. When is a child started on ARVs?

11. What are the common side effects of ARVs in children?

12. How can a person ensure that a child adheres to ARVs?

AIM OF THE LESSON

Lesson 4.4 aims to share information on PMTCT.

Learning Outcomes

By the end of this lesson learners should be able to:

- Show an understanding of Prevention of Mother-To-Child Transmission of HIV (PMTCT)
- Explain how HIV is transmitted from mother to child
- Explain ways to prevent HIV transmission from mother to child
- Explain the types of antiretroviral medicines (ARVs) available to pregnant women and to both mother and child during labour and delivery
- Explain ways to maximise health and growth of the baby during pregnancy
- Show an understanding of the care of babies from 6 hours to 6 months old
- Show an understanding of the importance of partners jointly visiting the clinic
- Explain the PMTCT process

Lesson Contents

- Prevention of HIV before pregnancy
- Prevention of HIV during pregnancy
- Prevention of HIV during childbirth and immediately afterwards
- Prevention of HIV after childbirth and during breastfeeding

References

1. Clinical Guidelines: Prevention of Mother-To-Child Transmission (PMTCT) 2nd Edition 2010. National Department of Health, South Africa
2. National Department of Health. National Contraception and Fertility Planning Policy and Service Delivery Guidelines. 2012

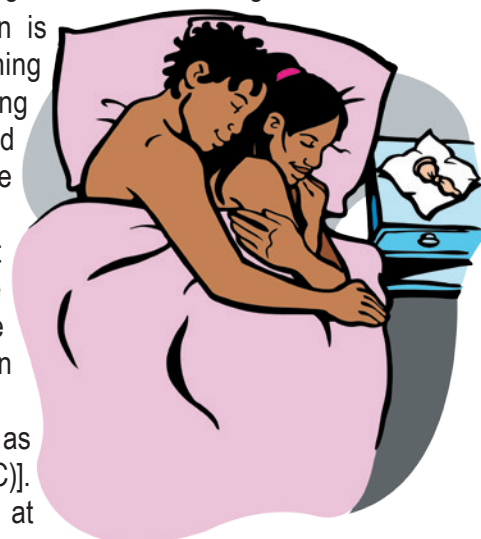
Your role as a CCG

Your role as a CCG is to explain the importance of enrolling in the Prevention of Mother-To-Child Transmission programme, if she is HIV-positive. You will need to follow up with her to make sure that she has done this. You should also use the opportunity to talk to all women, especially if they are pregnant, about knowing their HIV status, and if they do not know, refer them to the clinic for an HIV test.

1. What is PMTCT?

PMTCT stands for the Prevention of Mother-To-Child Transmission of HIV. An HIV-positive woman can pass HIV to her baby during pregnancy, labour and delivery or breastfeeding. The PMTCT programme has four stages:

- Primary prevention of HIV (before pregnancy).** The woman is educated about practicing safer sex (e.g. using condoms), abstaining and preventing unwanted pregnancies, especially women living with HIV. It is important to note that a woman cannot be forced to have a Termination of Pregnancy if she is HIV-positive [see Lesson 3.2 on Termination of Pregnancy (TOP)]
- Antenatal Care (during pregnancy).** Women who are pregnant and HIV-positive should be identified as early as possible before 14 weeks (3 months) of pregnancy so that they can enrol in the PMTCT programme and get medicines to prevent passing on HIV to their babies
- Labour and Delivery.** The mother should go to the clinic as soon as the signs of labour begin [see Lesson 3.3 on Antenatal Care (ANC)]. She must take the ARV medicines given to her by the nurse at the clinic
- Postnatal Care (after birth).** Both mother and the baby will receive ARV medicines



How is HIV transmitted from a mother to child?

There are three main ways in which a mother can transmit HIV to her baby:

a. During pregnancy

There is a bigger chance of passing HIV to the baby during pregnancy if:

- The mother is infected with HIV just before or during pregnancy
- The mother has advanced AIDS



b. During childbirth

There is a bigger chance of passing HIV to the baby during the birth if:

- The mother has a high number of HIV viruses in her body at the time of delivery. (This can happen if she is recently infected or is not taking medicines to decrease the number of viruses)
- If there is a long and complicated delivery
- There is less chance if:
 - The mother is already on ARV medicines
 - The mother is enrolled and committed to the PMTCT programme



c. During breastfeeding

There is a bigger chance of passing HIV to the baby during breastfeeding if:

- The mother has cracked nipples or swollen, painful breasts
- The mother is not exclusively breastfeeding for the first six months after the baby is born (She is giving the baby other milk, foods or liquids)
- The mother becomes infected with HIV after the birth of her child and while breastfeeding

It is important that all breastfeeding mothers either use condoms correctly every time they have sexual intercourse or abstain from sex until they have stopped breastfeeding their babies. This is so that they will not get HIV during breastfeeding and risk passing it on to the baby.



Handy Hints

Exclusive breastfeeding reduces the risk of the baby getting HIV [see Lesson 3.4 on Postnatal Care (PNC)].

2. How can the transmission of HIV from mother to child be prevented?

a. Prevention before pregnancy

Each woman has to check and confirm if she is pregnant by taking a pregnancy test at the clinic. She may be pregnant even if she missed just one of her periods. Passing on HIV from mother to child can be prevented by:

- HIV-negative women should make sure they stay HIV-negative by knowing their partner's HIV status and practicing safer sex. They should get tested for HIV again at 32 weeks (8 months of pregnancy) to make sure they have not become HIV-positive during the pregnancy
- HIV-positive women should enrol in the PMTCT programme immediately, before 14 weeks
- Bringing the woman's partner to be tested and practicing safer sex (use a condom) during the pregnancy
- Ensuring that women living with HIV, their children and families receive medicines, care and support

Before falling pregnant, what should a woman and her partner consider?

The woman and her partner should consider the following:

- Plan the pregnancy or prevent an unwanted pregnancy with the help of the nurse from their clinic [see Lesson 3.1 on Family Planning]
- Know their HIV status by going for HIV couples counselling and testing
- If they are HIV-positive, have regular checks of their CD4 cell count [see Lesson 4.1 on HIV and AIDS] and start ARV treatment [see Lesson 4.3 on Anti-Retroviral (ARV) Therapy] if they are told to do so
- Go for an STI check-up and have any STIs treated [see Lesson 4.8 on Sexually Transmitted Infections (STIs)]
- Get information on how to prevent passing HIV onto their baby (PMTCT)

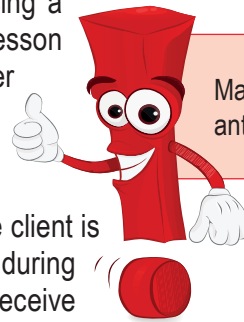
Why is it important for a woman to know if she has a Sexually Transmitted Infection (STI) before she falls pregnant?

It is important for the mother to test for an STI as it may be passed on to the baby and may cause serious health problems for the baby. Most STIs, if detected and treated early, can be cured. An STI may also be passed onto the partner [see Lesson 4.8 on Sexually Transmitted Infections (STIs)].

b. Prevention during pregnancy

Why is it important to go to the clinic as early as possible?

The first 3 months of a pregnancy is a very important time in the baby's development. It is important to get the correct advice on how to have a healthy pregnancy by practicing a good lifestyle, e.g. no smoking or drinking alcohol [see Lesson 2.2 on Healthy Eating]. It is very important for the mother to book for antenatal care before 14 weeks of pregnancy [see Lesson 3.3 on Antenatal Care]. The first visit to the clinic is very important because the healthcare workers at the clinic will get to know how healthy or unhealthy the client is and will be able to check whether their health changes during pregnancy. If they are HIV-positive, the earlier they receive medicines for HIV, the greater are the chances of giving birth to a healthy baby who is HIV-negative.



Handy Hints

Make sure that pregnant women book at the antenatal clinic before 14 weeks of pregnancy.

Why is it important for the mother to go for regular antenatal check-ups?

It is important to go for regular antenatal check-ups so that the healthcare workers can check up on both the mother's and baby's health. The mother should visit the clinic at least five times during her pregnancy.

What will happen when the mother visits the clinic?

The nurses will check the mother's general well-being; check the blood pressure and sugar levels. They will also check the baby's growth and identify any other problems. The nurses will educate the mother on the danger signs that she should be aware of, e.g. vaginal bleeding, lower abdominal pain or severe headaches and what to do if this happens.



What types of ARV medicines will a mother get if she is pregnant?

All women who are HIV-positive and who become pregnant will qualify to start ARVs immediately irrespective of the CD4 cell count.

If they are already on ARVs they will continue to take their usual medicines as prescribed. Some medicines may need to be changed if they are not supposed to be used in pregnancy

What other steps should the woman take during pregnancy to help the baby's growth and development?

Pregnant women should:

- Visit the antenatal clinic regularly so that the healthcare worker can check up on the baby's growth and check the mother's general health
- Take the tablets that the healthcare worker gives them during the clinic visit, e.g. iron and folic acid supplements
- Eat healthy, fresh foods; stop drinking alcohol and lots of coffee or fizzy drinks [see Lesson 2.2 on Healthy Eating]
- Speak to the nurse at the clinic before taking any medicines, including traditional medicines as they may be harmful to the mother and/or the baby



What can happen if the woman does not go for their antenatal clinic visits?

Any problems with the mother and baby will not be picked up and she may not get the care that she needs to make sure that she and her baby remain healthy.

Why is it important for the partner to visit the clinic with the woman?

It is important that the partner attends the antenatal clinic visits with the client. It will help him understand the pregnancy and what is happening in the woman's body. He will be able to give her emotional support and encourage her to stick to healthy eating and lifestyle choices.

c. Prevention during labour

As stated above, all women who are HIV-positive and who become pregnant will qualify to start ARVs immediately, irrespective of their CD4 cell count.



What ARVs will be given to the mother and her baby during labour and delivery?

If they are already on lifelong ARVs; they should continue to take their ARVs as usual.

The baby will also get ARVs at birth and will have to stay on the ARVs for six weeks. If this does not happen, the client should return to the clinic and request the medicines, as these are very important for the baby.



d. Prevention after birth

What steps should be taken to ensure that the baby remains healthy after birth?

- By this time the mother should have made a decision on the best feeding choice for the baby. Support will be given to assist her with this decision
- She has to make sure that the baby is taken for an HIV test at six weeks of age to check the HIV status of the baby. This can be done at the same time as the first vaccination (immunisation) visit at the clinic [see Lesson 3.5 on Infant and Child Care]
- Before the baby's HIV test results are received:
 - The mother will continue to receive her medicines
 - The baby will be given medicine that helps to prevent infections and will continue to take the medicines given at birth for a total of six weeks
- If the baby's HIV test result is positive:
 - The baby will be checked by the nurse and the mother will be given advice on what to do next
 - The baby will continue to take the medicines that prevent infections
 - The baby will be started on ARV medicines immediately
- If the baby's HIV test result is negative:
 - The baby will need to have another HIV test at 18 months of age
 - If the baby is being fed on the breast only, the medicines that prevent infections will be continued until all breastfeeding has been stopped, since the baby could still get HIV from the mother during breastfeeding, and needs to be protected from other infections if this happens
 - If the baby is on formula-feeding only, the medicines that prevent infections will be stopped
 - The baby must be taken to the clinic for regular check-ups; for growth monitoring and vaccination. The mother or caregiver should always remember to take the baby's *Road-to-Health Booklet* with her each time she visits the clinic



3. What steps should be taken to protect the health of the mother and that of the baby?

Clients should attend all the postnatal clinic visits. The nurse will assess both the mother's and the baby's health. [see Lesson 3.5 on Infant and Child Care]. If the mother did not experience any complications during birth, the routine clinic visits should take place at the following times:

- Six hours after the baby is born and before the mother is discharged from the clinic
- Within six days after the baby is born
- Six weeks after the baby is born
- Six months after the baby is born

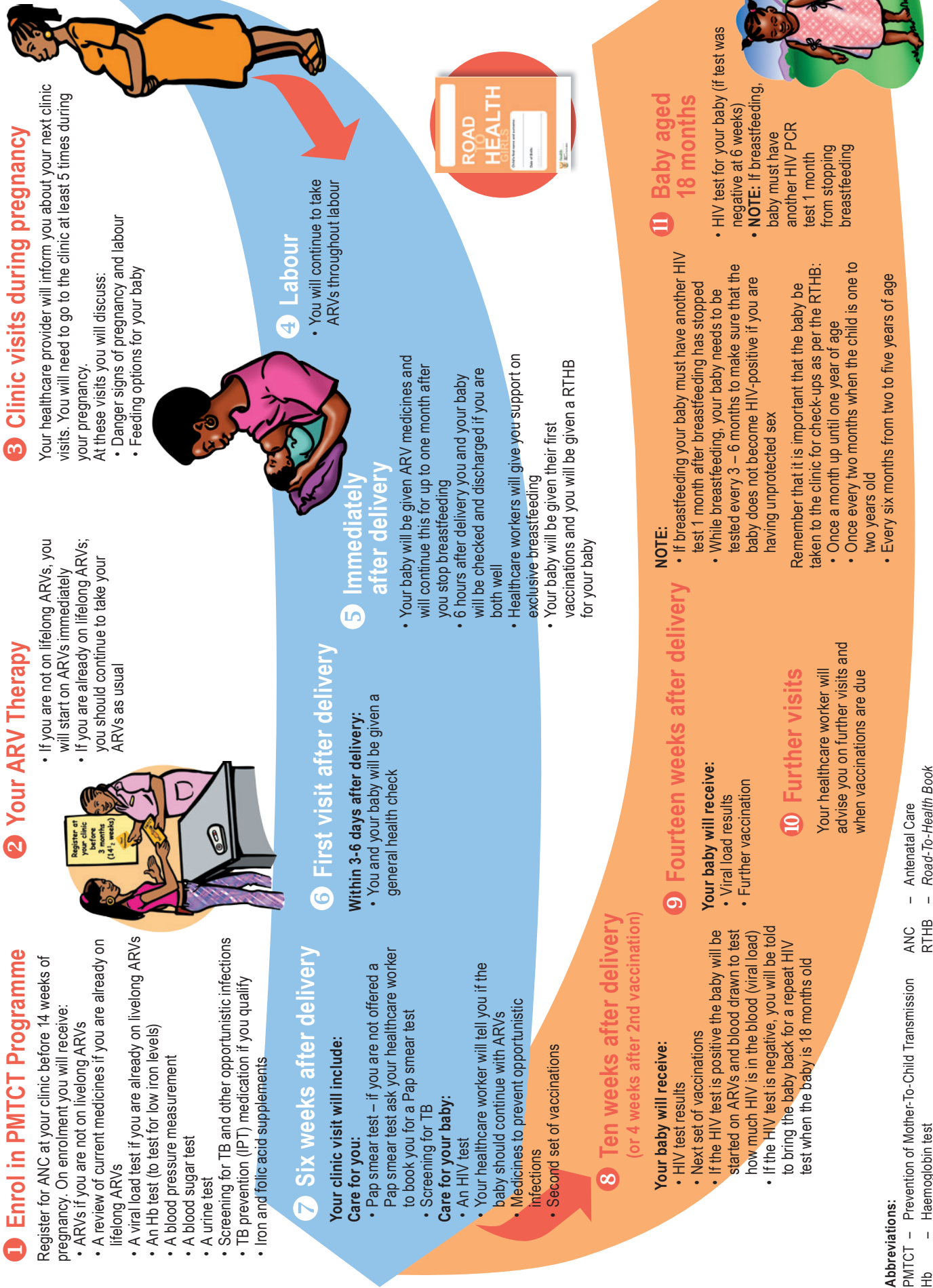
The mother should also follow the *Road-to-Health Booklet* schedule so that she knows when to take the baby to the clinic for check-ups to make sure that the baby is growing and developing well. The schedule of visits as per the *Road-to-Health Booklet*, to make sure that the baby is growing and developing well are as follows:

- Once a month until the baby is one year old
- Once every two months when the child is one to two years old
- Every six months from two to five years of age

PMTCT Care Pathway

Note to the CCG:

Please show and read this PMTCT Care Pathway to all your clients who are HIV-positive and pregnant.



Abbreviations:
PMTCT – Prevention of Mother-To-Child Transmission
Hb – Haemoglobin test

ANC – Antenatal Care
RTHB – Road-To-Health Book

4. Feeding options

Exclusive breastfeeding

Exclusive breastfeeding is when a mother feeds only breast milk, and nothing else, not even water, to the baby. This method of feeding a baby is better for the health of the baby for many reasons which are explained in Lesson 3.4 on Postnatal Care (PNC). Baby should be exclusively breastfed for the first six months. Exclusive breastfeeding will lower the risk of HIV being passed from the mother to the baby.

What factors must a mother consider before exclusive breastfeeding?

These are some factors to consider when thinking about exclusive breastfeeding:

- Will the mother be at home or close to the baby for frequent feeding for the first six months?
- Does the mother have support from her family members to exclusively breast feed? [see Lesson 3.4 on Postnatal Care (PNC)]

The baby will also get medicine to prevent infections from six weeks of age until the breastfeeding has stopped and the baby has had an HIV PCR test which shows that the baby is HIV-negative.

It is important to remember that each baby will get ARV medicine for a different length of time depending on how long the mother chooses to exclusively breastfeed. Also the ARV medicine that the baby gets will be different from the medicine that the mother will get. It is important that, if the mother has any concerns about the ARV medicine that the baby is taking, she talk to the healthcare workers at the clinic.

Different types of breast milk

The milk from the mother's breast will be different at different times of the feed. Basically there are three different types of milk that a mother will produce which are as follows:

- Colostrum is a yellow, sticky fluid that comes out in the first few days after birth. This is very good for the baby
- Foremilk (first milk during feed) quenches the baby's thirst
- Hind milk (produced after the foremilk with each feed) helps the baby gain weight and grow

This is why the mother must first empty one breast before feeding from the other. Breastfeeding and expressing and storage of breast milk is explained in Lesson 3.4 on Postnatal Care (PNC).



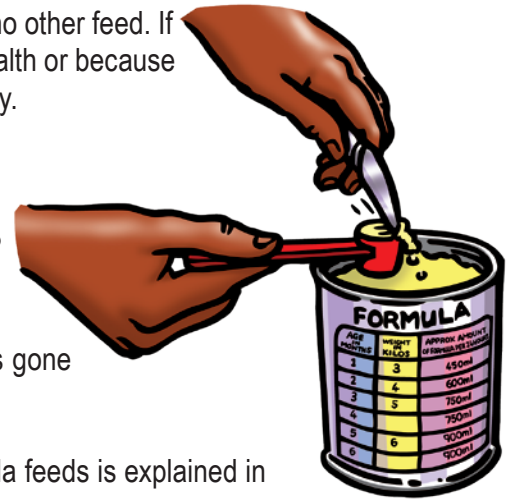
Exclusive formula feeding

Exclusive formula feeding is when the baby is given only formula feed and no other feed. If the mother is unable to exclusively breastfeed the baby because of poor health or because she has to go to work, she may choose to exclusively formula feed her baby.

These are some factors to consider when thinking about formula feeding:

- Does the mother have the money to buy formula feed and bottles?
- Is there access to clean water for making the formula?
- Will the mother be able to sterilise the bottles frequently?
- Will other family members be able to feed the baby if mother has gone to work?

The cleaning and sterilisation of bottles and teats and preparation of formula feeds is explained in [see Lesson 3.4 on Postnatal Care (PNC)].



Group Discussion

1. In groups discuss PMTCT and the ways to prevent Mother-To-Child Transmission of HIV.

- Before pregnancy

- During pregnancy

- During labour

- After pregnancy

2. What are the main points affecting mothers who:

- Do not take their ARVs as prescribed

- Do not go to a clinic during pregnancy

3. How can CCG's deal with the above?

4. What factors should a mother consider when deciding on feeding options for her baby?

AIM OF THE LESSON

Lesson 4.5 aims to share important information about Tuberculosis (TB), how a person gets it, how it is spread and ways to prevent the spread of TB.

Learning Outcomes

By the end of this lesson learners should be able to:

- Show an understanding of TB
- Show an understanding of the signs and symptoms of TB
- Explain how TB is spread
- Explain ways to prevent the spread of TB
- Explain the link between TB and HIV
- Explain the tests that can be done to diagnose TB

Lesson Contents

- Definition of Tuberculosis
- Signs and symptoms
- How TB is spread
- Ways to prevent TB transmission

References

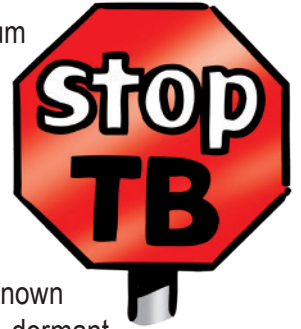
1. eHow Health. How to Prevent Spread of TB. 1999. United Kingdom. Available from: http://www.ehow.com/how_5671806_prevent-spread-tb.html
2. CE@UP, HISP, HST. Health Information Systems for Data Capturers (HISDC). Electronic TB Register training presentations. 2009
3. National Department of Health. The South African Tuberculosis Control Programme. Practical Guidelines. South Africa. 2004

Your role as a CCG

Your role as a CCG is to explain to your clients what TB is; the risk factors for TB and the importance of being tested for TB. You should also conduct TB screening for everyone in the households and, if necessary, refer your clients to the clinic for follow up. You should also use the opportunity to talk to your clients about the importance of knowing their HIV status and to refer them to the clinic for an HIV test.

1. What is Tuberculosis (TB)?

TB stands for tuberculosis and is a disease caused by bacteria (germs) called *Mycobacterium tuberculosis*. Bacteria are very small and can't be seen with our eyes. The TB bacteria can attack any part of the body, but it usually attacks the lungs. TB is spread through the air when people who have the disease cough, sneeze or spit. TB is the most common opportunistic infection among people living with HIV [see Lesson 4.9 on Opportunistic Infections (OIs)] and TB is a main cause of death of South Africans who are HIV-positive.



People can be infected with TB although it remains dormant (sleeping) in their bodies; this is known as inactive TB. This means they are not sick and cannot spread the illness to others. The dormant bacteria in these people can become active (awake), especially if they have HIV, and make them sick. People with HIV who have inactive TB can take medicine to prevent them from developing active TB.



Handy Hints

IMMUNE SYSTEM

Contains the body's soldiers that fight disease.

What is the link between TB and HIV?

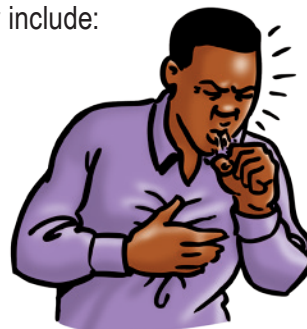
TB is the most common infection among people living with HIV and is the main cause of death among people who are HIV-positive in South Africa. A person living with HIV already has a weaker immune system, which makes it easier for them to become infected with TB and harder to fight it. TB is also known as an Opportunistic Infection [see Lesson 4.9 on Opportunistic Infections (OIs)]. An HIV-positive person with untreated TB will develop AIDS far quicker compared to someone who has had their TB treated.



What are the signs and symptoms of Tuberculosis?

Only people with active TB show signs and symptoms which may include:

- A cough that lasts two weeks or longer
- Coughing up blood or sputum
- Weight loss
- Sweating a lot at night
- No appetite (Not wanting to eat)
- Chills
- Fever
- Feeling weak and tired
- Chest pain



How can TB be identified?

If the answer to any of these questions is yes, then it is very important that the person gets tested for TB. If a person has advanced HIV, they may not always show any signs or symptoms that they are also infected with TB so they must always get tested for TB.

The CCG should use the TB screening tool to check the client's risk of TB and encourage them to go the clinic to be tested for TB.

TB Screening Tool

Read the following questions to all individuals in the household and refer them for TB testing at the clinic if you tick ANY ANSWER in the coloured blocks

	Y=Yes	N=No
1. Have you been coughing for more than two weeks?	Y	N
2. Have you recently coughed up blood in your sputum?	Y	N
3. Have you been losing weight for no reason?	Y	N
4. Have you lost your appetite?	Y	N
5. Are you sweating a lot at night?	Y	N
6. Are you having chills that keep coming back and last for three days or more?	Y	N
7. Do you have chest pains?	Y	N
8. Do you get short of breath if you are walking or doing minor household chores?	Y	N
9. Do you have swellings in the neck, armpit or elsewhere?	Y	N
10. Have you been in contact with anyone who is on TB Treatment, or has been on TB Treatment in the last 6 months?	Y	N

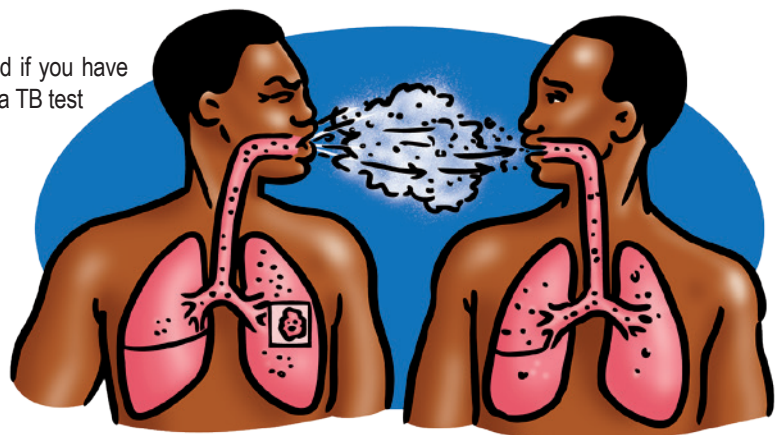
Note to the CCG:

Please read the following to the client.

- If you know your HIV status and you are HIV-positive and if you have been coughing for 24 hours, you should go to the clinic for a TB test

2. How is TB spread?

TB can get into the air when someone coughs, sneezes or spits. Anyone can get it by breathing in the air with the germs.



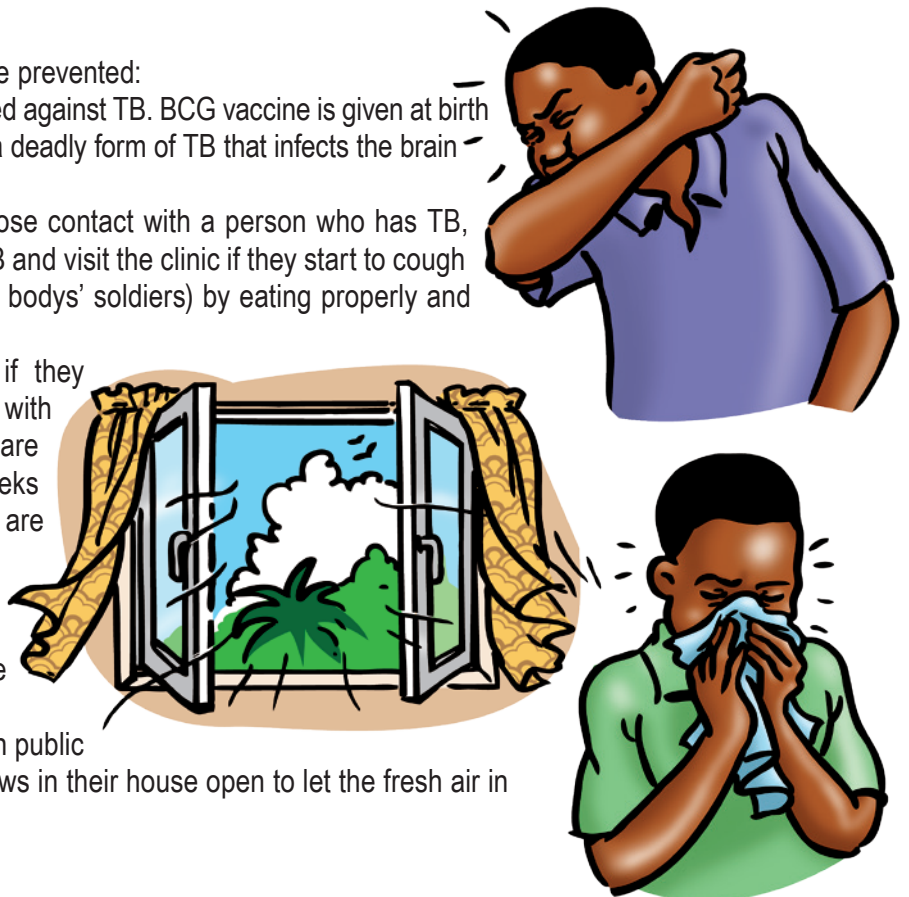
TB spreads with the help of the following:

- Closed spaces without air flowing through it
- Having a weak immune system, e.g. being infected with HIV. The HIV virus destroys the immune system so the body cannot fight TB as well as if there was no HIV
- Too many people in overcrowded and poorly aired spaces (houses with doors and windows not opened, classrooms with the windows closed, crowded minibuses taxis)
- Clinics not separating people who are coughing and may have TB from other people, and keeping the windows and doors in the clinics closed
- Clinics being too busy and have problems coping with the number of patients. This means that it may take a long time for people with TB to be treated, allowing them to infect other people before they get treated
- Poor eating habits because it weakens the immune system which makes a person sick often

3. How can TB be prevented?

Below are some of the ways that TB can be prevented:

- Make sure all babies are vaccinated against TB. BCG vaccine is given at birth and helps protect babies against a deadly form of TB that infects the brain
- Washing hands regularly
- Family and friends who are in close contact with a person who has TB, must watch out for the signs of TB and visit the clinic if they start to cough
- Building the immune system (the body's soldiers) by eating properly and getting daily exercise
- The person should get tested if they feel they are in close contact with an infected person or if they are coughing a lot for more than 2 weeks or for more than 24 hours if they are HIV-positive
- Persons with TB should cover their nose and mouth when they sneeze or cough to help stop the spread of the disease
- Persons with TB should not spit in public
- People should keep all the windows in their house open to let the fresh air in



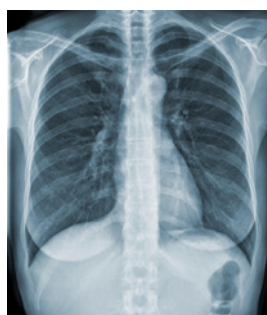
Can TB be cured?

TB can be cured, even in a person who is living with HIV. Curing TB saves lives. Curing an HIV-positive person of TB will give them a better life and also help stop the spread of TB in the community [see Lesson 4.6 on Tuberculosis Treatment].

4. What tests will the clinic do to find out if someone has TB?

If someone has the signs and symptoms mentioned before, they should go to the clinic. One of the following tests will be done:

- **Sputum test** (when they cough up phlegm): A person coughs into a bottle and then the collected sputum is sent to a laboratory for a test to tell if it contains TB
- **X-ray**: An X-ray done at a clinic or hospital may show changes in the lungs. The chest X-ray is really for those patients who are cannot cough up phlegm or are having problems breathing
- **Biopsy**: A small piece of flesh/tissue is taken from the area in the body where they think there is TB. The person will be given medicine so that they do not feel any pain when this is done. It is sent to the laboratory to be tested
- **Aspiration**: A needle and syringe is used to take a small amount of fluid from the body, where they think there is TB



Handy Hints

All children under 5 years who are in close contact with a person infected with TB should visit the clinic to get medicine to stop them from getting TB.

Tips on how to avoid getting TB

- Sit outside, e.g. under a tree with the client. If client is in bed, politely request to open any windows or doors
- Wear a mask. Do not re-use the mask. Throw it away in a bin after you leave the client
- Politely ask the client to cover their mouth when they cough and explain why this is important
- Spend as little time in the room as possible
- After visiting the client always make sure hands are washed with soap and clean running water

Group Exercise

Working in groups, create a poster to improve awareness of TB in the clinic.

Some tips on what to do:

- Signs and symptoms
- How would a person know if someone has TB?
- How is TB spread?

AIM OF THE LESSON

Lesson 4.6 aims to share some important information about TB treatment.

Learning Outcomes

By the end of this lesson learners should be able to:

- Show an understanding of the treatment for TB
- Explain TB treatment options for people living with HIV
- Explain the importance of adhering to TB treatment and what happens when the treatment is completed
- Understand Multi Drug Resistant (MDR) and Extremely Drug Resistant (XDR) TB
- Explain the importance of testing often during the treatment and after completing the treatment
- Explain what is meant by Directly Observed Treatment Strategy (DOTS) and why it is important
- Explain what is Isoniazid Prophylactic Therapy (IPT)
- Show an understanding of who should get IPT and why
- Show an understanding of the safety of IPT in pregnancy
- Explain what happens if a person develops TB while on IPT treatment

Lesson Contents

- TB treatment
- TB treatment options for people living with HIV
- Importance of staying on TB treatment and the effects of completing the treatment Multi Drug Resistant (MDR) and Extremely Drug Resistant (XDR) TB
- Directly Observed Treatment Strategy (DOTS)
- Isoniazid Prophylactic Therapy (IPT)

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2. National Department of Health. The South African Tuberculosis Control Programme. Practical Guidelines. South Africa. 2004

Your role as a CCG

Your role as a CCG is to explain to clients why TB treatment is important; the importance of taking TB treatment exactly as prescribed and who should get TB preventive treatment. You should make sure that the TB treatment is being taken exactly as prescribed by the healthcare workers at the clinic. You should also use to opportunity to do HIV and TB screening and, if necessary, to refer clients to the clinic for follow-up.

1. TB treatment

TB can usually be treated with TB medicines, which are taken daily for six to nine months. These medicines are very good and if taken correctly, can cure TB.

The type and amount of TB medicine is determined by:

- whether the client has had TB before
- whether the client has a kind of TB that is more difficult to treat
- the weight of the client

Therefore nobody should share their TB treatment with anyone else.

What are the names of the medicines used to treat TB?

- Rifampicin
- Isoniazid
- Ethambutol
- Pyrazinamide
- Streptomycin



TB treatment options for people living with HIV

- **HIV-positive (not taking ARVs) and TB-positive:** If the clients are HIV-positive and TB-positive, they will be started on ARVs. They will given TB medicine for six to nine months. (The type of TB medicine that the client gets and how long they will have to take the medicine depends on where the TB is and whether they have had TB before). Their healthcare provider will tell them when to start ARVs
- **HIV-positive (taking ARVs) and TB-positive:** If the person is already taking ARVs when they get TB, they will start TB treatment straight away and continue for at least six months. They may have to change some of their ARVs, but the healthcare worker will advise them on this
- **If the client is pregnant:** The healthcare worker will advise them about what medicines they can take and when

2. Poor adherence to TB treatment

Poor adherence to TB treatment means the person has either missed some doses, does not take their treatment regularly, or have stopped taking their medicines before they have finished the full course of treatment.

Why do people stop taking treatment?

- They feel better and think they do not need the treatment any longer
- They are experiencing side effects
- They cannot get to the clinic to collect their treatment
- They move away to another area to stay or work and there is no clinic nearby

What happens when people stop taking their TB medicines?

When people do not take their medicines like the healthcare worker has told them, then the TB in their body may become resistant to the medicines. When this happens, a person has Multi Drug Resistant TB (MDR-TB). This means that some of the medicines will not help in fighting the TB. It is very important that they take all the tablets in the way the nurse or doctor has told them to do. A person can also get MDR-TB from someone who already has it, so it is important that everyone in the community takes their medicines properly so that the spread of MDR-TB can be prevented.

MDR-TB is TB that is very difficult to treat and the usual medicines used to treat TB will not work with this type of TB. This is called drug resistance.

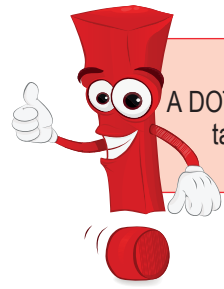
MDR-TB has to be treated by other anti-TB drugs, which are known as second-line drugs. These drugs are more expensive and could have more side effects on the body. If they are not taken as the doctor or nurse has said, then the TB will get even more resistant and the person will get Extremely Drug Resistant TB (XDR-TB). XDR-TB is so difficult to treat that they cannot use first- and second-line drugs. This type of TB is very dangerous and very hard to cure. Many times, patients have to go to hospital to get medicines that can only be given with an injection or through a drip.

3. How often should tests be done to make sure the treatment is working?

It is important to test the sputum during the treatment to make sure that the TB treatment is working. This is done two months after the treatment has started and at the end of treatment, or as advised by the nurse at the clinic. These tests show the healthcare worker that the person is getting better. If the test stays positive it may show that the TB they have is resistant TB and the treatment needs to be changed.

4. DOTS

Directly Observed Treatment Strategy (DOTS) is used to help people take their medicines regularly.



Handy Hints

A DOT supporter is a trained healthcare worker who watches a TB patient taking their medication to ensure they are taking it correctly.



5. What is Isoniazid Prophylactic Therapy (IPT)?

IPT is a type of medicine used to prevent people with inactive (sleeping) TB from getting sick with active TB. Taking one tablet a day for usually six to nine months, has shown to be a very good way of preventing someone from developing active TB.



Who should get IPT?

All HIV-positive people with no signs or symptoms of active TB should get IPT. Patients who have successfully finished TB treatment more than two years ago should also be given IPT.

All children under five years of age and who have come into contact with people with TB and who do not show signs of active TB should be given IPT.

Is IPT safe during pregnancy?

It is safe for HIV-positive pregnant women, with no signs of active TB, to begin IPT at any time during pregnancy. If a woman falls pregnant and she is taking IPT, she must still complete it.

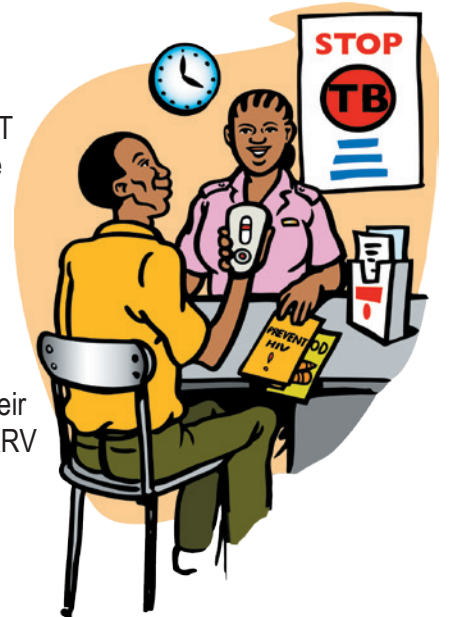
What happens if a client who is receiving IPT needs to start taking ARVs?

If a client is receiving IPT and needs to take ARV therapy, they should complete their IPT and take their ARVs. IPT should not be stopped because they have started ARV therapy.

What happens if a person is on IPT and develops TB?

If a person is on IPT and starts coughing excessively, they should go to a clinic as soon as possible to be screened for active TB.

If they have active TB, their IPT will be stopped and they will be given TB treatment instead.



Who should not get IPT?

- Patients with signs and symptoms of TB
- Patients with active liver disease
- Patients who drink a lot of alcohol as they will be at higher risk of having liver problems

Group Discussion

1. Who should take IPT?

2. How is IPT different from drugs used for treating TB? (When is IPT taken and when are drugs used for treating TB taken?)

3. Discuss how the CCG can support a TB patient by being a DOTS supporter.

4. Discuss what to say to clients to help them take their TB medicine.

5. Discuss the importance of taking treatment.

AIM OF THE LESSON

Lesson 4.7 aims to share some important information about TB in children.

Learning Outcomes

By the end of this lesson learners should be able to:

- Show an understanding of specific knowledge of TB in children

Lesson Contents

- TB in children

References

1. Shingadia D, Novelli V. Diagnosis and treatment of tuberculosis in children.2005. Available from: <http://www.tbalert.org/worldwide/children.php>
2. Swaminathan S, Rekha B. Paediatric tuberculosis: global overview and challenges. Clin Infect Dis. 2010 May 15; 50 Suppl 3:S184-94

Your role as a CCG

Your role as a CCG is to make sure that children are screened and treated for TB as soon as possible. You should also make sure that children who are taking TB treatment have caregivers who know and make sure that the child takes the right medicines in the correct doses of the medicines and at the right times of the day. You should also use the opportunity to talk to and screen everyone in the household for HIV and TB and if necessary, refer to the clinic for follow up check-ups.

1. TB in children



Handy Hints

Vaccinate children against TB.

Tuberculosis (TB) is a disease caused by bacteria which usually attack the lungs.

Children can get infected with TB very easily before the age of 5 years. This is because their immune systems are not yet strong enough to fight the TB. Children who live in households where an adult has active TB can get TB from that person. This is because they are often in close physical contact with other members of the household. The risk is very high when there are a lot of people living in a house. Often, when a child gets sick with TB, it is a sign that all household members should be checked for TB as well. It is sometimes very difficult to tell if a child has TB. If they look sick, have a poor appetite, have lost weight or are not growing, they should be taken to the clinic where tests will be done to see if the child has TB.



Handy Hints

CHILDREN ARE IN DANGER IF THEY ARE:

- Younger babies and young children can get very sick from TB
- Malnourished – they don't have healthy food and are not eating well
- HIV-positive – especially if they are not on ARVs
- Sick with other childhood diseases or have worms
- Living in crowded spaces

2. Treatment of TB in children

Children are given tablets or syrup depending on their age and weight. It is very important for children to have a responsible person giving them their treatment every day [see Lesson 4.3 on Anti-Retroviral (ARV) Therapy]. If the child goes to school, a teacher may be asked to help with this. The treatment lasts six months for most children. If the child is very sick, he may be required to take treatment for a longer time.



Group Exercise

1. Which children are most at risk of getting TB?

2. How can the risk for children be reduced?

3. Why is it important for the CCG to be a DOTS supporter for children with TB?

AIM OF THE LESSON

Lesson 4.8 aims to share some important information about Sexually Transmitted Infections (STIs).

Learning Outcomes

By the end of this lesson learners should be able to:

- Show an understanding of what an STI is
- Identify the most common symptoms of STIs
- Show an understanding of ways to not get an STI
- Explain to the client what to do if they think they have an STI
- Show an understanding of the link between STIs and HIV
- Explain why STIs should not be left untreated
- Explain the importance of telling their partner(s)

Lesson Contents

- Common symptoms of STIs
- STI advice
- Link between STI and HIV
- Importance of clients telling their partners if they have an STI

References

1. WHO. Sexually Transmitted Infections. 2009. Fact sheet No 110
2. Moys A; Khumalo F. Guidelines for improving quality of STI Management in a health district. Health Systems Trust. South Africa. 2004

Your role as a CCG

Your role as a CCG is to explain to your clients what Sexually Transmitted Infections (STIs) are; how they can be prevented and what to do if they think have an STI. You should also screen all sexually active clients for STIs and, if necessary, refer them to the clinic. You should also use the opportunity to talk to your clients about the importance of knowing their HIV status and refer them to the clinic for an HIV test.

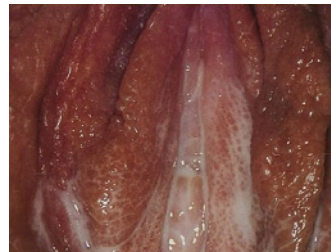
1. What are Sexually Transmitted Infections (STIs)

STI stands for sexually transmitted infection and can be passed on from one person to another person by having unprotected sex, like anal, oral or vaginal sex. There are many different kinds of STIs; with symptoms like discharges, sores, warts, blisters or swelling.

2. What does an STI look like?

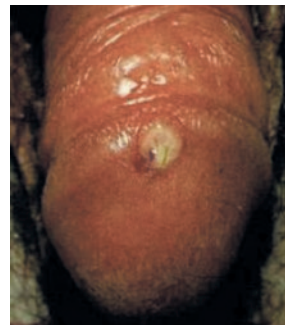
Discharges

- This is a fluid, other than semen (can be white, yellow or green) which comes out of the vagina or the penis. It may cause itching or burning while urinating. The type and amount of vaginal discharge may change in the same woman over time; each woman will know what is normal for her and when there is a change in the vaginal discharge, e.g. change in the amount, change in colour



Sores

- Sores may be on the penis or on the labia or in the vagina. They may be painless



Warts

- Genital warts start as small hard painless bumps in the vaginal area, on the penis or around the anus
- If they are not treated, they can become large and grow into a fleshy growth that looks like a cauliflower



Blisters

- These are small painful lumps containing fluid and are very infectious (easily spread from person to person)



Swellings

- These swellings are mostly found in the groin and are caused by the glands getting infected and forming a hard painful swelling. This may become an abscess (filled with fluid) and burst



3. How to prevent getting an STI?

There are several ways that a person can prevent themselves from getting a STI:

- Using a condom every time they have sex
- If a client or the client's partner has an STI, they need to get treated as soon as possible. They must always use a condom
- Being faithful to one partner, who is also faithful to them in turn and make sure that neither partner has an STI
- Not having sex at all (abstaining)

4. How do STIs link to HIV and AIDS?

HIV and AIDS is a Sexually Transmitted Infection, just like other STIs. It is much easier to get infected with HIV if a person already has another STI. This is because STIs can cause sores or small cracks in the skin and lining of the vagina and on the tip of the penis, which makes it easier for the HIV virus to enter the body.

If a client has an STI, they should get tested for HIV.

The CCG should use the STI Screening Tool to determine if the client may have an STI.

STI Screening Tool

Read the following questions to all sexually active individuals and refer them to the clinic for STI assessment if you tick ANY ANSWER in the coloured blocks

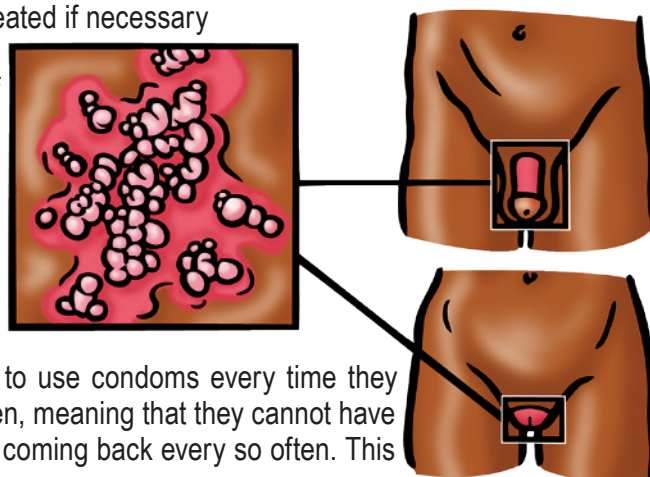
	Y=Yes	N=No
1. Have you had unprotected sex with a partner who you suspect may have an STI?	Y	N
2. Is your partner being treated for an STI?	Y	N
3. Do you have abnormal and/or smelly discharge from your vagina or penis?	Y	N
4. Do you have abnormal bleeding from your vagina or penis?	Y	N
5. Do you experience pain or burning during sex?	Y	N
6. Do you experience pain or burning when you pass urine?	Y	N
7. Do you experience lower abdominal pain?	Y	N
8. Can you see sores on your vagina, penis or anus?	Y	N
9. Is your vagina, penis or anus painful or itchy?	Y	N
10. Have you or your partner been tested for HIV in the last 3 months?	Y	N

5. What should a person do if they think they have an STI?

It is very important to do the following if someone thinks they may have an STI:

- Start using a condom straight away for all sexual activity. Condoms must be used every time they have sex
- Go to the nearest clinic and get tested as soon as possible
- Go with their partner to the clinic to get tested and treated if necessary
- Finish the medicine as prescribed
- The medicine should not be shared with the partner if both have an STI
- While they are at the clinic they should ask for an HIV test as well

STIs can become very serious if they are not treated. Some types of STIs can attack the organs in the body and may even cause death. Women who have had some STIs can have many complications, including passing the STI on to her baby during pregnancy. Therefore, it is important for her and her partner to use condoms every time they have sex. STIs can also cause infertility in both men and women, meaning that they cannot have children. Some STIs can be lifelong infections, with symptoms coming back every so often. This can be prevented with medicines obtained from the clinic.



Exercise

2. What should a client do if they think they have an STI?

3. Explain the importance of telling the sexual partner(s) if a person has an STI.

AIM OF THE LESSON

Lesson 4.9 aims to share some important information about Opportunistic Infections.

Learning Outcomes

By the end of this lesson learners should be able to:

- Show an understanding of what an opportunistic infection is
- Explain what common opportunistic infections affect HIV-positive clients

Lesson Contents

- Opportunistic infections

References

1. Lars Osterberg, M.D., and Terrence Blaschke, M.D. Adherence to Medication. *New England Journal of Medicine* 2005; 353:487-497. Available from: <http://www.nejm.org/doi/full/10.1056/NEJMra050100>
2. KwaZulu-Natal Department of Health. The Prevention and Treatment of Opportunistic Infections in HIV infected Adults. Available from: <http://www.kznhealth.gov.za/arv/arv6.pdf>
3. National Department of Health. Clinical Guidelines for the Management of HIV & AIDS in Adults and Adolescents. South Africa. 2010. Available from: <http://www.kznhealth.gov.za/medicine/adultguidelines2010.pdf>

Your role as a CCG

Your role as a CCG is to explain to your clients what Opportunistic Infections (OIs) are and the common types of OIs. You should discuss the importance of the client going to the clinic if they think they have an OI. Refer them to the clinic and do a follow up visit to make sure that they have gone to the clinic. You should also discuss the importance of them knowing their HIV status and refer them to the clinic for an HIV test.

1. Opportunistic Infections

An opportunistic infection (OI) is an illness that can happen in people whose immune system is weak (such as people with HIV) but does not harm a healthier person. OIs can happen in anyone who has a weak immune system, and not only in people who are HIV- positive. Some of these can be prevented by taking medicines, but many of these illnesses are very serious and need to be treated with special medicines. Some of these opportunistic infections are also known as AIDS-defining illnesses in people who have HIV. These are illnesses that are very seldom found in people who have healthy immune systems. The sooner the client has an HIV test, the sooner the healthcare workers will be able to determine if the client needs to start ARV therapy, so clients should be encouraged to have an HIV and know their HIV status as soon as possible. This will lower the risk of the client getting an OI.



2. Common conditions in people who have HIV

There are a number of infections that can be seen in people with HIV, but can also be seen in people who do not have HIV. Seeing these conditions listed below on a client means they need to be referred immediately for an HIV test. However, it does not mean that they definitely have HIV.

a. Chest Infections

- **Pneumonia:** This can be caused by a number of different germs. Symptoms among HIV-positive people are very similar to the symptoms in clients who are HIV-negative. The symptoms include chills, chest pain and pus in the sputum. Because other types of chest infections are common among HIV-positive people, healthcare worker will make sure of the cause of the infection before they start the treatment. This may require a chest radiograph, blood cultures, a white blood cell count and tests to rule out other infections. Treatment is usually aimed at the most commonly identified disease-causing bacteria
- **Tuberculosis:** TB is the most common infection among people living with HIV and is the main cause of death among people who are HIV-positive in South Africa [see Lesson 4. 5 for more information on Tuberculosis (TB)]

b. Skin conditions

These conditions found on different parts of the body can cause irritation and itchiness. Usually these skin conditions can be treated with the correct medicines.

- **Kaposi's Sarcoma (KS):** This is a type of cancer. It looks like flat brown or purple patches on the skin that are painless. It is most commonly found on the skin but can also be found inside the body, especially in the mouth
- **Shingles:** These are painful blisters, which run in a straight line or in a circle, on one area of the body. Shingles is known as 'ibhande', the belt in isiZulu. The blisters and pain may take some time to go away. The blisters can be covered with a soothing lotion



like Calamine. Pain can be treated with medicine, e.g. disprin. If the pain is severe refer the client to the clinic for stronger medicine

c. Conditions of the brain

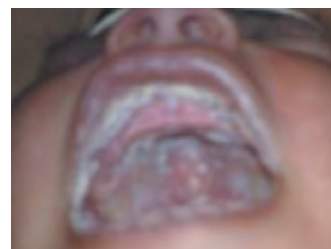
- **Cryptococcal Meningitis:** This is an infection of the lining of the brain and spinal cord. This infection comes on in a few days to a few weeks after the germs that cause it enter the body. Symptoms may include headache, feeling like vomiting or vomiting, fever for no reason, tiredness, being irritable, change in mental state and hearing or seeing things that are not there. Some people may have a stiff neck. They may also get a skin rash

It is treated with medicines to kill the germs. It is important for the client to get treatment as early as possible. Even after treatment, the germs can come back and the client may need to take drugs all the time to prevent it from coming back.

d. Mouth infections and conditions

Common mouth infections are:

- **Oral Thrush:** White patches on the tongue and inside the mouth. Oral thrush can be treated but it is important that it is noticed early so the client can start treatment as soon as possible. If it spreads, this can also cause pain in the throat and problems with swallowing and eating
- **Herpes:** Painful blisters around the mouth; commonly known as 'cold sores'. These can also affect the area of the vagina or penis. When signs do appear in this area, they normally show as one or more blisters on or around the vagina or penis. The blisters can be itchy and painful, but they can be treated with the correct medicines, which sometimes have to be taken for a long time



Other signs that show that someone may be having an opportunistic infection:

- Diarrhoea over a long period of time: some people can have diarrhoea for many months when their immune system is very weak. A person may experience cramps in the tummy and diarrhoea or vomiting
- Coughing and fever (or hot at night) may be a sign of tuberculosis
- Weight loss (ask if their clothes do not fit any more) is usually a sign that someone is very sick

If the CCG thinks that a client has an opportunistic infection, refer the client immediately to the clinic for treatment and do a follow up visit to make sure that the client has gone to the clinic. The sooner the client has an HIV test, the sooner they will be started on treatment.



Handy Hints

IMPORTANT!

Remember TB is also an OI so if the client is coughing for more than 24 hours they need to go for TB screening at the clinic.

Exercise

1. What are OIs?

2. Name three common conditions in people who have HIV.

AIM OF THE LESSON

Lesson 4.10 aims to share information on condoms.

Learning Outcomes

By the end of this lesson learners should be able to:

- Explain what a condom is
- Describe the importance of the practice of safer sex
- Describe risky sexual practices
- Demonstrate how to use the male and female condoms
- Explain the importance of using a condom (male and female condoms), especially if one or both partners are HIV-positive

Lesson Contents

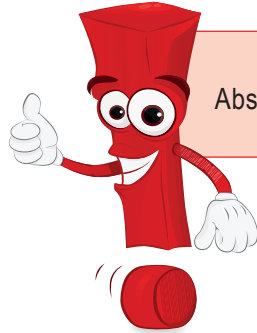
- Condoms
- Safer sex
- Risky sexual practices

References

1. National Department of Health. Provider Initiated Counselling and Testing. South Africa. 2010
2. Southgate, K. Learning about health and common diseases. Juta Learning, Lansdowne. 2006
3. KwaZulu-Natal Department of Health. Adherence in HIV care and Treatment. South Africa. 2004. Available from: <http://www.kznhealth.gov.za/arv/arv1.pdf>

Your role as a CCG

Your role as a CCG is to explain to clients the importance of using condoms every time they have sex. You should also use the opportunity to talk to your clients about the importance of knowing their HIV status and referring them to the clinic for an HIV test. With the use of the demonstration tool, demonstrate how to use the male condom.



Handy Hints

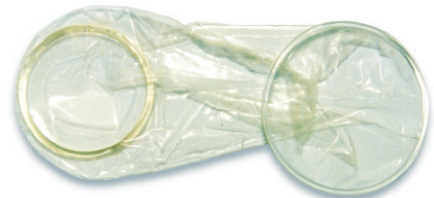
Abstain, be faithful, condomise, and know your status.

1. What is a condom?

- A male condom is a thin layer of latex or rubber that a man wears on his penis to prevent the semen from entering the vagina during sex
- The female condom is a long tube made of soft thin plastic which fits inside the vagina and prevents the semen from getting into the vagina
- The condoms can be obtained free of charge from clinics. If the clinic does not carry condoms then ask for them to be ordered



Male condom



Female condom

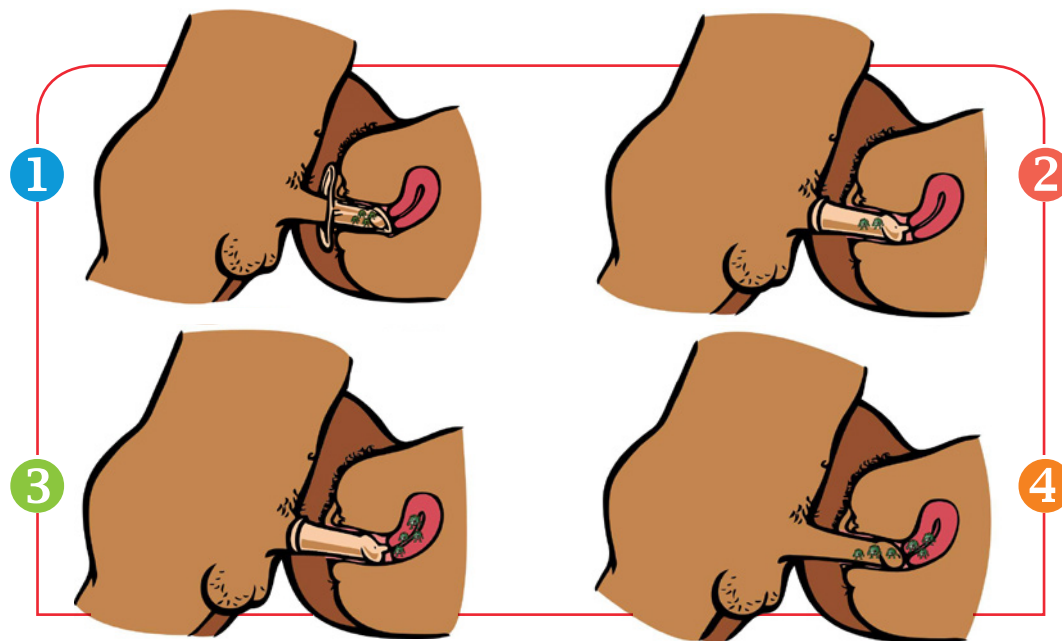
2. What do condoms do?

Condoms prevent the male and female body fluids (semen and vaginal fluids) from mixing. If condoms are used consistently and correctly (as described below) during sexual intercourse they prevent the following:

- Semen from entering the woman's vagina, this also prevents pregnancy
- Contact with body fluids like semen and vaginal fluids in which the HIV virus lives
- The spreading of sexually transmitted infections (STIs)

3. What is safer sex?

- Safer sex means the client does not get their partner's semen, blood or vaginal fluids on or in their body



1. Female condom prevents HIV from passing HIV-positive man to HIV-negative woman

2. Male condom prevents HIV from passing HIV-positive man to HIV-negative woman

3. Male condom prevents HIV from passing HIV-positive woman to HIV-negative man

4. Without a condom, HIV passes back and forth between the man and woman

Risky sexual practices

- **'Dry sex'** is when products (such as baby powder) or herbs are used to lower the natural fluid that is produced by a woman during sex and make it more likely for the woman to become infected with HIV because she may get small cuts and tears in her vagina
- **Unprotected anal sex** has a greater risk of HIV infection compared to vaginal sex as the cells in the anus are easily damaged
- Sex without a condom
- Having many sexual partners
- Having sex without a condom when there are sores on the penis or vagina can increase the risk of getting and passing on HIV. An open sore or injury to the skin makes it easy for the HIV and bodily fluids to enter the blood stream

What is the importance of using a condom when one or both of the sexual partners are HIV-positive?

It is very important to use a condom even when both partners are HIV-positive because they may have different types of HIV. This means that a person can get re-infected with a different type of HIV and the amount of the virus in the body can increase. Their partner may also be resistant to ARVs and then they can get infected with resistant HIV. It also means that both partners will be protected against STIs.

4. How to use the condom?

Use of the male condom

It is important to select and use the right size condom. If the condom is too large it may slip off during intercourse. If the condom slips off during intercourse, a new one should be used. A new condom should be used each time there is sexual intercourse. Condoms should not be used more than once.

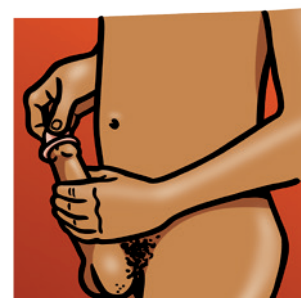
Step 1

The condom packet should be sealed. Condoms from an open packet should not be used. If the date stamped on the condom packet has passed, then it has expired and should not be used because the rubber will not be protective. Condoms should not be left in the heat or in direct sun. When opening the condom care should be taken not to damage the condom. Avoid tearing it with the teeth or sharp fingernails.



Step 2

The condom should only be put on when the penis is erect. Check which way the condom will unroll, then hold the condom at the teat/tip and squeeze the air out of the teat/tip. Leave the small section at the top for the semen to fill. The condom should be gently unrolled down the full length of the penis, making sure there are no air bubbles because they may cause the condom to break during the sexual intercourse.



Step 3

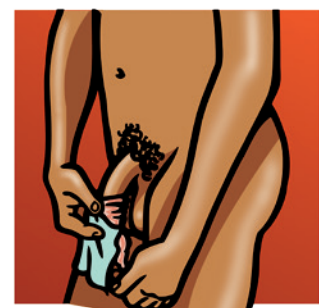
After sexual intercourse, the penis should be slowly removed from the partner while it is still erect. Hold the condom at the base of the penis to prevent it from slipping off. The condom should be removed from the penis carefully.



Step 4

A knot should be tied in the condom to prevent the fluid from spilling, and then it should be wrapped in a tissue and thrown away in the bin or burned. It should never be left lying around where children and other people can come into contact with it. The man should wash his hands.

It is important that oil-based lubricants are not used with condoms as these will cause the condom to break up. This will mean that the condom will no longer offer any protection.



Use of the female condom

The female condom is a long tube of thin plastic. It has a small closed end and a large open end and each end contains a flexible ring. It can be inserted up to half an hour before intercourse if necessary.

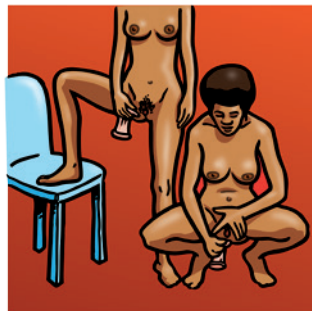
Step 1

Check the expiry date on the condom packet. Check the condom package to make sure that there are no cracks, holes or open sides by placing the condom casing between the thumb and forefinger and pressing gently. Gently push the condom inside the package to one side to allow room to tear open the package. Carefully remove the condom using the fleshy part of the fingers and not fingernails.



Step 2

The outer ring covers the area around the opening of the vagina. The inner ring is used for insertion and helps to hold the sheath in place during sexual intercourse. While holding the female condom at the closed end, grasp the flexible end and squeeze it with the thumb and second and middle finger so that it becomes long and narrow. Push the condom into the vagina, making sure that the outer ring stays outside and is flat. To make insertion easy, the woman can squat or lie on her back or put one foot on a chair. It is important that oil-based lubricants are not used with condoms as these will cause the condom to break up. This will mean that the condom will no longer offer any protection.

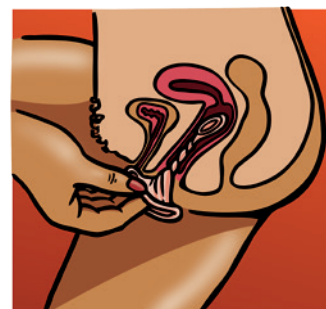


Step 3

Guide the erect penis into the condom, making sure it does not enter around the side. The female condom is loose-fitting and will move during sexual intercourse. If it feels like the outer ring is being pushed in while having sex, stop and pull the outer ring back to its original position.

Step 4

To remove the condom, twist the outer ring to keep the sperm inside then gently pull the condom out of the vagina.



Step 5

Wrap it in a tissue and dispose of it appropriately by throwing it in a waste bin. Do not flush the condom down the toilet. Do not use the condom again. They must always use a new condom every time they have sex.

Module 4 Infectious Diseases

4 Lesson 4.10 Prevention of HIV and STIs: The Role of Condoms

5. Why do some people find it difficult to use condoms?

It can be difficult to talk about using condoms. Some people think that sex is not as enjoyable if condoms are used. Maybe the client feels this way or has had bad experiences in the past. They should not let a bad or embarrassing experience become a health risk to their life or that of their partner by not using condoms correctly. People that use condoms the correct way do not lose sexual pleasure and they still enjoy the sexual activity.



Group Discussion

Divide into groups and discuss the following:

1. What are some of other false beliefs about condoms that may be found in communities?

2. How could they be dealt with?

3. What is safer sex?

4. Describe risky sexual practices.

5. Explain the importance of using a condom.

Practical: The facilitator to demonstrate how to use the condom

The learners should also demonstrate how to use the condom using the demonstration tool. This can be done in pairs (Demonstrate the effects of oil-based lubricants like Vaseline on the condom).

AIM OF THE LESSON

Lesson 4.11 aims to introduce Medical Male Circumcision (MMC) and help learners understand benefits and risks of MMC.

Learning Outcomes

By the end of this lesson learners should be able to:

- Explain what medical male circumcision is
- Explain the benefits of being circumcised
- Show an understanding of the risks to being circumcised
- Discuss the use of condoms if circumcised
- Explain where circumcision services are available

Lesson Contents

- Medical male circumcision
- Benefits of MMC
- Risks for circumcision
- Condom use after circumcision

References

1. MedicineNet.com. Circumcision. The Medical Pros and Cons. 1996 – 2011. Available from: http://www.medicinenet.com/circumcision_the_medical_pros_and_cons/page5.htm
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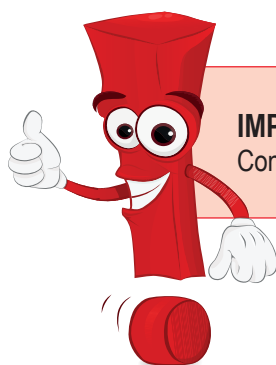
Your role as a CCG

Your role as a CCG is to explain the role of Medical Male Circumcision (MMC) in the prevention of HIV to your clients. You also need to discuss with your clients the need to continue to use condoms every time they have sex, even after they have been circumcised. You should also use the opportunity to talk to them about the importance of them knowing their HIV status and refer them to the clinic for an HIV test.

1. What is Medical Male Circumcision?

Medical Male Circumcision (MMC) is the removal of the entire foreskin, which is the skin covering the tip of the penis, by a trained healthcare worker. MMC is different from traditional circumcision, which is done for religious reasons or as part of a coming of age or initiation ceremony.

If the circumcision is done at the hospital and the foreskin has been completely removed under clean conditions from the head of the penis, the risk of infection is reduced.



Handy Hints

IMPORTANT!

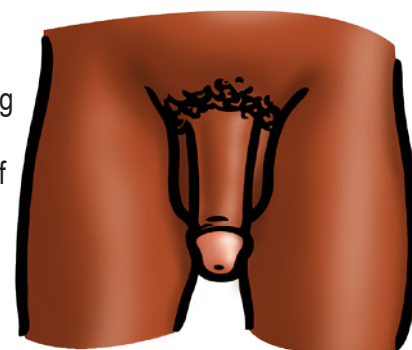
Condom should always be used whether circumcised or not.

What are the health benefits of full circumcision?

The following are the benefits of male circumcision:

- The penis is easier to clean
- Improves sexual pleasure as the foreskin which can bruise and tear during sexual intercourse will be removed
- Cells that attract HIV have been removed, hence there is a reduced risk of HIV infection during unprotected sex
- Reduces the risk of the man getting infected with HIV because there is no tearing and bruising
- Reduces the risk of cancer of the penis

Full circumcision



Handy Hints

IMPORTANT!

Male circumcision will only work in reducing the risk of getting HIV if the entire foreskin is removed. Partial circumcision does not reduce the risk of HIV infection.

3. What are the risks to being circumcised?

All surgeries have some level of risk, but this risk is low. The following are the risks for male circumcision:

- Slight bleeding from the surgical site
- Infection of the surgical site or at the opening of the urethra, which is the tube that carries urine and semen to the outside of the body
- The entire foreskin may not be removed, leaving portions of it attached to the penis. This may cause pain during erection
- The outer skin layer of the penis may be removed accidentally
- Too much bleeding
- Partial or full removal (amputation) of the tip of the penis (this happens very seldom)
- Circumcision increases the chance of meatitis (swelling of the opening of the penis)

Behavioural risks:

- If not properly counselled, circumcised men may be tempted not to use a condom during sex. It is very important to use a condom all the time, even after the circumcision wound has completely healed

4. Where can a man get circumcised?

A man can enquire at any clinic or hospital about circumcision. In most cases the local clinic will refer the client to the feeder hospital. Most clinics in KZN are involved in a campaign to increase the number of men circumcised and have specific days when the hospital either sends doctors to the clinic to do the MMC or they transport the clients to hospital for the MMC and back to the clinic the same day.

5. Is it safe to have unprotected sex after circumcision?

No. It is not safe at all to have unprotected sex because male circumcision does not provide complete protection against HIV infection. So, it is very important to continue using condoms even after circumcision.

When male circumcision is combined with other practices for safer sex, such as use of condoms, the reduction of sexual partners and abstinence from sexual activities, the risk is reduced. It is very important that those who are newly circumcised wait six weeks before engaging in sexual activities. This is because it will take six weeks to heal after the circumcision.

6. What care must be taken after the circumcision?

- The penis should have a bandage or dressing on it which allows an opening for the man to urinate. This dressing should stay on for 3 days
- It may be a little painful when the anaesthetic wears off. (An anaesthetic is the medicine that is given to make the area numb so that the man does not feel pain during the procedure). This is normal
- It may burn a little when the man first passes urine
- There may be a little bleeding on the dressing
- After 3 days the bandage can be removed. If it is stuck to the penis, it can be soaked off with warm water
- The man should wear underpants to provide support
- The man should wash his penis twice a day with soap and warm water after the bandage is removed
- If there is excessive bleeding, swelling or pain he should return to the clinic immediately

At what age is it best to be circumcised?

In order to lower the risk of HIV infection, it is best for the man to be circumcised before he becomes sexually active.



7. Should HIV-positive men get circumcised?

If a person already has HIV, circumcision will not reduce the risk of their partner becoming infected. It is important to use a condom every time they have sex in order to protect their partner from getting infected with HIV.

Exercise

1. What is Medical Male Circumcision?

2. What are the health benefits of full circumcision?

3. Your client, Themba, has just been circumcised. When can he start to have sex again and should use condoms now that he has been circumcised?

Exercise

4. Where should circumcisions be done and who should do them?

AIM OF THE LESSON

Lesson 4.12 aims to share information on stigma and discrimination.

Learning Outcomes

By the end of this lesson learners should be able to:

- Show an understanding of the effect of stigma and discrimination on those infected and affected by HIV and AIDS
- Discuss myths (misconceptions) regarding HIV and AIDS
- Identify vulnerable groups within the households and community
- Discuss and identify the human rights of people living with HIV and AIDS in terms of the South African Constitution

Lesson Contents

- Stigma and discrimination
- Myths of HIV and AIDS
- Vulnerable groups
- Human rights of People Living With HIV/AIDS (PLWA)

References

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Your role as a CCG

Your role as a CCG is to educate your clients about HIV and the need to talk openly about the issues related to HIV. You should also discuss with them the need to treat people who are HIV-positive with respect as well as the care and support that people who are HIV-positive need. You should also use the opportunity to talk to your clients about the importance of knowing their HIV status and, if necessary, starting with anti-retroviral therapy and show them how this will play a role in lowering stigma and discrimination. You should encourage them to go for an HIV test and follow up with them to check if they have.

1. Stigma, discrimination and HIV

Stigma causes fear and unfair treatment of people because it is believed that they are different. For example, people living with HIV may suffer from HIV-related stigma by their family, friends or co-workers by being isolated, ridiculed, abused, rejected, or be exposed to rumours and gossip. Stigma is due to lack of information and understanding about HIV and AIDS.

Discrimination happens when people are treated unfairly because of stigma. This is seen in the way in which people act towards others. Sometimes people living with HIV are treated badly by people, e.g. they may not allow those living with HIV to eat with them or work beside them. This prevents people looking for the help they need and this makes it difficult to control the spread of the HIV, because people are frightened of letting others know that they are HIV-positive.



How does stigma and discrimination increase the spread of HIV?

Because people living with HIV are scared of the stigma and discrimination, many people deny that they are HIV-positive or may not disclose or accept their HIV status. This causes:

- People to believe that everything is fine and believing there is no risk, even if they are at risk
- People not to use condoms
- People being scared of being tested, if they think they may be HIV-positive
- Pregnant women may be scared to test which will lead to more babies being born with HIV
- People who are living with HIV not to get treatment or care for fear that their HIV status will be known by everyone
- Unnecessary stress is put on people living with HIV



How does providing treatment, care and support help to reduce stigma?

The availability of treatment, care and support provides more hope, and improves the health and quality of life for people living with HIV. This helps people to have an HIV test to find out about their HIV status and creates a feeling of trust and openness. With treatment, HIV has become more like any other chronic disease (e.g., high blood pressure), which can be managed and lived with for long periods of time. Thoughts and feelings about HIV will then hopefully change and not be so negative.

Common myths and facts about HIV

Myths about HIV	Facts about HIV
'HIV is God's punishment and a person with HIV has sinned or is dirty'	HIV is a medical condition. HIV is not a punishment and no one is guilty or innocent
'A person can get HIV through casual contact.' This myth has led to children living with or affected by HIV not being allowed to attend school because of fears that they pass on HIV to other children	By law children have the right to go to school, whether they are HIV-positive or not. HIV cannot be passed on through casual contact. Take care when attending to any person that is bleeding by using latex gloves or an alternative
'If someone insists on using condoms, that person is HIV-positive'	Everyone should use condoms whether they are HIV-positive or not, because it is the responsible thing to do. It is everyone's responsibility to protect their health and that of their partner. People should worried by someone who does not want to use a condom
'HIV only happens to some people who are gay, black, poor or migrants'	Anyone can get HIV. It does not matter whether they are rich, poor, educated or uneducated or a respected leader in the community
'HIV brings shame upon communities.' People have been hidden, abandoned and sometimes even killed because of their HIV status	The Constitution of South African prevents discrimination against people because of their health status. The support of family and friends is very important for the safety of the HIV-positive person
'People with HIV are sick, don't work and will burden their companies.' People they work with may refuse to share an office with someone living with HIV for fear of getting HIV	A person with HIV can live a healthy life, where they continue to provide for their families for many years if they take good care of themselves and take their ARVs regularly. Employers may not test someone for HIV without their informed consent

2. Vulnerable groups in the community

Which individuals and households are more vulnerable to HIV and AIDS?

Those most vulnerable to HIV and AIDS include:

- Pregnant women
- Women and men with little support and money to fall back when times get hard
- People with more than one sexual partner in the last 12 months
- Households where an important family member has died, the family may have had to sell some of their possessions to have enough money to care for them. This might leave the family unable to care for themselves due to lack of money
- Orphans without anyone to care for them
- Youth due to lack of access to youth friendly services
- Women who have to give up their jobs to care for the sick at home
- Widows who do not have a lot of power in the household
- The elderly who are caring for the sick or orphaned children
- Men who have sex with men
- Sex workers and their clients



Which communities are more vulnerable to HIV and AIDS?

Communities that:

- Do not have organisations that support individuals and families, e.g. Church outreach programmes
- Do not have strong ties between family and neighbours who can help when there are problems
- Are poor and where there are families that are not regularly getting enough food
- The family has very few ways to get support from the outside, e.g. information, home-based care, food for work and school feeding programmes
- Poor communities near highways and close by to where trucks stop
- Have high rates of unemployment
- Very little help in the community because of the high number of people infected with or affected by HIV and AIDS
- Informal settlements around cities and towns

3. The human rights of people living with HIV and AIDS in terms of the South African Constitution

People living with HIV and AIDS have rights which must be protected. The South African Constitution (1996) describes exactly how a healthcare worker should behave. The Constitution clearly states that healthcare workers must ask the client to make their own decisions about what to do in order to protect their rights. If the clients are unable to do so, the healthcare worker needs to help the client to make the right decision to protect their health and wellbeing.

Module 4

Infectious Diseases

4

Lesson 4.12

Stigma and Discrimination

The healthcare workers must always act in the best interest of the clients and must never deliberately harm the clients. They should treat all clients and/or family members in the same way whatever race they are, who they prefer to have sex with or their HIV status.

Informed consent means that a person is treated with respect as they are given all the information to help them make the right decisions, especially regarding HIV testing. It is important that the person is able to understand the information given to him or her and choose the right path of action without anyone forcing them to do so. By law a healthcare worker must provide all the information to a client before they choose to have an HIV test. The law allows parents and caregivers to give consent for HIV testing on behalf of minors or children.



The Constitution is very strict about keeping the health status of an individual confidential. However, it encourages the clients to share their HIV status with the medical staff as it may benefit the client and their family.

The South African Constitution promises the right of freedom and security of the person and the right to privacy and dignity. It also provides all who live in South Africa, with the right to be able to get public health services.

Group Discussion

Divide into groups and discuss the following:

1. What is stigma and discrimination?

2. Give examples of stigma and discrimination in all parts of life in the community and how stigma and discrimination can be stopped in a positive way.

3. How does the law in South Africa help to prevent stigma?

AIM OF THE LESSON

Lesson 4.13 aims to share some important information about the signs and symptoms and spread of cholera.

Learning Outcomes

By the end of this lesson learners should be able to:

- Show basic knowledge of what cholera is, signs and symptoms and how it spreads
- Show prevention measures such as water safety and hand washing

Lesson Contents

- Basic knowledge of cholera
- Signs and symptoms of cholera
- How is cholera passed on
- Prevention of cholera

References

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Your role as a CCG

Your role as a CCG is to explain to your clients what cholera is; the signs and symptoms for cholera; how it is spread and what can be done to prevent cholera. You should show them how to make an Oral Rehydration Solution to give to people with cholera until they get to the clinic. You should talk to your clients about the importance of making sure that if people think they have cholera, especially babies and young children, they go to the clinic as soon as possible. You should also talk to your clients about the importance of making sure that they use clean water. You should also show them how to make water clean.

1. What is cholera?



Handy Hints

Always drink clean water. Treat all water that comes from rivers and streams even if it looks clean. It must be treated before drinking or cooking with it [See Lesson 2.6 on Environmental Hygiene].

Cholera is an extremely dangerous disease that affects both adults and children. It is caused by bacteria (germs) which get into the stomach by drinking contaminated (dirty) water. It leads to very serious diarrhoea. People who get cholera can become very sick, especially if it spreads within the community.

2. Where is cholera found ?

The cholera bacteria are found in rivers, streams, lakes or pools of water that are unclean and used as toilets. Cholera is found in places where there is no water treatment, no proper toilets, and where the rubbish is not properly burnt or buried [see Lesson 2.6 on Environmental Hygiene].

An outbreak of cholera often happens during floods because the stools which have cholera bacteria mixes with the flood water that spreads into the houses of people. It is easy to get cholera in squatter camps and in refugee camps, because there are no proper toilets; or no rubbish removal or clean water.

How does a person get cholera?

If one person living in a community has cholera, it can spread to many others, usually through their stools. The stools which have the cholera bacteria in them contaminate the surrounding water. A person can get cholera by drinking the contaminated water or by eating food which has been washed or cooked in the contaminated water.

3. How does a person know if someone has cholera?

In some cases the signs of cholera are very mild, but cholera can be very serious. Someone who has the following symptoms may have cholera:

- Extremely watery diarrhoea which is light white in colour (it can look like the water left over when cooking rice)
- Vomiting
- Weakness and confusion
- Cramps in the legs



Generally these symptoms appear after two or three days of becoming infected but it is possible to become very sick within a few hours.

People with severe diarrhoea and vomiting can get dehydrated very quickly and this can lead to death if not treated immediately. Dehydration means their body has lost a lot of water. It is very important that a person drinks a lot of fluids continuously when they have watery diarrhoea.



Handy Hints

CAREFUL!

Babies and young children can become very sick very quickly when they have watery diarrhoea. It is best to take them to the nearest clinic as soon as possible.

4. How is cholera treated?

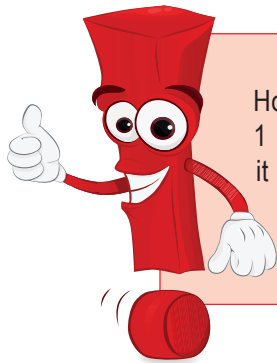
Cholera can be treated by giving the person a lot of fluids frequently. If they can still drink water from a cup, then they can be treated with oral rehydration solution, which can easily be made at home. When a person loses fluid it is said they are dehydrated. When they are given fluid to help them, it is called rehydration. The treatment that can be made at home is called Oral Rehydration Solution. Oral means it is taken in by mouth.

If the person is not able to drink from a cup, or if they are drowsy and tired, they should be taken to the clinic for treatment.

5. How can people help stop cholera from spreading?

When many people living or working in the area have cholera, it is called an outbreak and the community can take simple precautions to stop it from spreading.

- People should try to keep the places that they collect water from clean
- Recommend to people to drink only boiled or disinfected water. This can be done in the following way:
 - Collect fresh water every day
 - Pour water through a clean cloth
 - Do one of the following:
 - Pour 1 teaspoon of bleach into 20 to 25 litres of water. Mix well and wait at least 30 minutes or
 - Boil the water. Let it bubble for one minute to make it clean and safe
 - Safe water can easily get dirty. Store the safe water in a clean closed container
 - To use the safe water:
 - Use a clean cup each time to scoop water from the container or
 - Pour water from the container when you need it
 - Do not use tap water and ice cubes. All water should be boiled or disinfected first before using for food, water or ice cubes



Handy Hints

How to make an oral rehydration solution at home: Boil one litre of water for at least 1 minute. Add 8 level teaspoons of sugar and a half teaspoon of salt. Wait until it cools down then give one cup every hour or after every wet stool for an adult (weighing about 60kg) and a half cup every hour or after every wet stool for a child (weighing about 20kg).

- People should wash their hands often during the day with soap and boiled or disinfected water, especially before they eat or prepare food and after using the toilet
- Everyone should use boiled or disinfected water to wash dishes, brush their teeth, or wash and prepare food
- Food:
 - Only food that is freshly cooked and served hot should be eaten
 - Raw and undercooked meat and fish should NOT be eaten
 - Fruits and vegetables should be peeled and washed with boiled or disinfected water
- Make sure that all family members wash their hands after using the toilet

Group Discussion

1. What are the signs of cholera?

2. Explain what can be done at home to treat people who have cholera, until you can get them to the clinic.

3. How can the spread of cholera be stopped in the community?

AIM OF THE LESSON

Lesson 4.14 aims to share some important information about signs, symptoms and treatment of typhoid.

Learning Outcomes

By the end of this lesson learners should be able to:

- Show basic knowledge of what typhoid is, signs and symptoms and modes of transmission
- Show prevention measures such as water safety and hand washing
- Explain the importance of completing treatment

Lesson Contents

- Typhoid signs, symptoms and treatment

References

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3. KwaZulu-Natal Department of Health. Typhoid fever www.kznhealth.gov.za/typhoidfever.pdf

Your role as a CCG

Your role as a CCG is to explain to your clients what typhoid is; the signs and symptoms for typhoid and how it is treated. You should talk to your clients about the importance of making sure that if people think they have typhoid, they go to the clinic as soon as possible. You should also talk to your clients about the importance of making sure that they use clean water. You should also show them how to make water clean.

1. What is typhoid?

Typhoid is a serious illness which causes high fever in people who are infected with a type of bacteria (germs) known as Salmonella. These bacteria are spread through food and water which has been contaminated by stools of people infected with the Salmonella bacteria.

2. What causes typhoid?

A person gets typhoid when they eat food or drink water that has the Salmonella bacteria in it. Once the person gets typhoid he or she passes the bacteria when they go to the toilet. If the person uses the river or any open area as a toilet, then the water in the river will become contaminated. If people drink or use this water for washing or cooking they will become sick. It is important to know that people who look healthy may also pass the typhoid bacteria to others. They can carry the bacteria for a long time after treatment. A special medicine can be given to the person to make sure this does not happen.



Handy Hints

After treatment patients can carry the typhoid bacteria for a very long time. The healthcare provider will give medicines to make sure all the typhoid has been removed from the body.

3. What are the signs and symptoms of typhoid?

After being infected, it takes between one to two weeks for the symptoms to show. Once infected, the person can be sick for about four to six weeks. They will have some or all of the following signs and symptoms:

- poor appetite (not wanting to eat)
- headaches
- aches and pains all over the body
- high fever
- tiredness
- diarrhoea
- vomiting
- belly pain which can be very severe

Some patients suffer from a very mild illness without any of the above symptoms. As a result, the patients do not know that they have typhoid and do not go to the clinic for treatment. These patients can continue to pass the typhoid bacteria to others for a very long time, sometimes for years, unless they are treated.

Babies and children who have diarrhoea and vomiting should be taken to the clinic as soon as possible.

AIM OF THE LESSON

Lesson 4.15 aims to share some important information about the signs, symptoms, prevention and spread of malaria.

Learning Outcomes

By the end of this lesson learners should be able to:

- Show basic knowledge of what malaria is, signs and symptoms and how it is spread
- Show knowledge of prevention measures such as insecticides and bed nets, as well as anti-malaria tablets
- Explain the importance of completion of malaria treatment

Lesson Contents

Malaria, signs and symptoms and how it is spread:

- Signs and symptoms of malaria
- How malaria is spread
- How malaria can be prevented
- Treatment of malaria

References

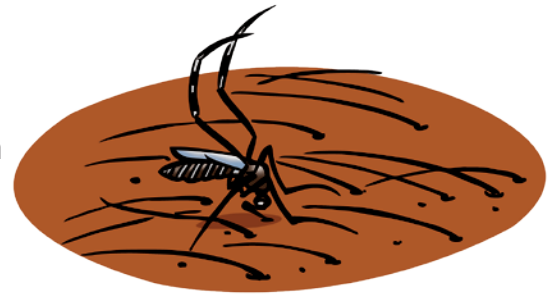
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Your role as a CCG

Your role as a CCG is to explain to your clients what malaria is; the signs and symptoms for malaria and how malaria can be prevented. You should talk to your clients about the importance of making sure that if people think they have malaria, they go to the clinic as soon as possible. You should also discuss with them the importance of making sure that pregnant women and babies are given medicine to prevent malaria.

1. What is malaria?

Malaria is a serious disease that is spread by mosquitoes, and from which a person can die if they do not get treatment. In South Africa, the mosquitoes that carry this disease are only found in certain parts of the country.



2. What are the signs and symptoms of malaria?

The signs and symptoms of malaria are:

- fever
- shivering
- muscle aches
- headaches
- tiredness

Some patients may also have:

- nausea
- vomiting
- cough
- diarrhoea

Children often have different signs that don't look like those mentioned above. malaria can be very dangerous for young children. If a child is suspected to have malaria, ask the child's caregiver to take the child to the clinic immediately.

The fevers and shivering will continue for a few days and then go away and then come back a few days later. Sometimes the skin and the whites of the eyes turn yellow. This means the malaria is very serious and the person needs to go to the hospital immediately.

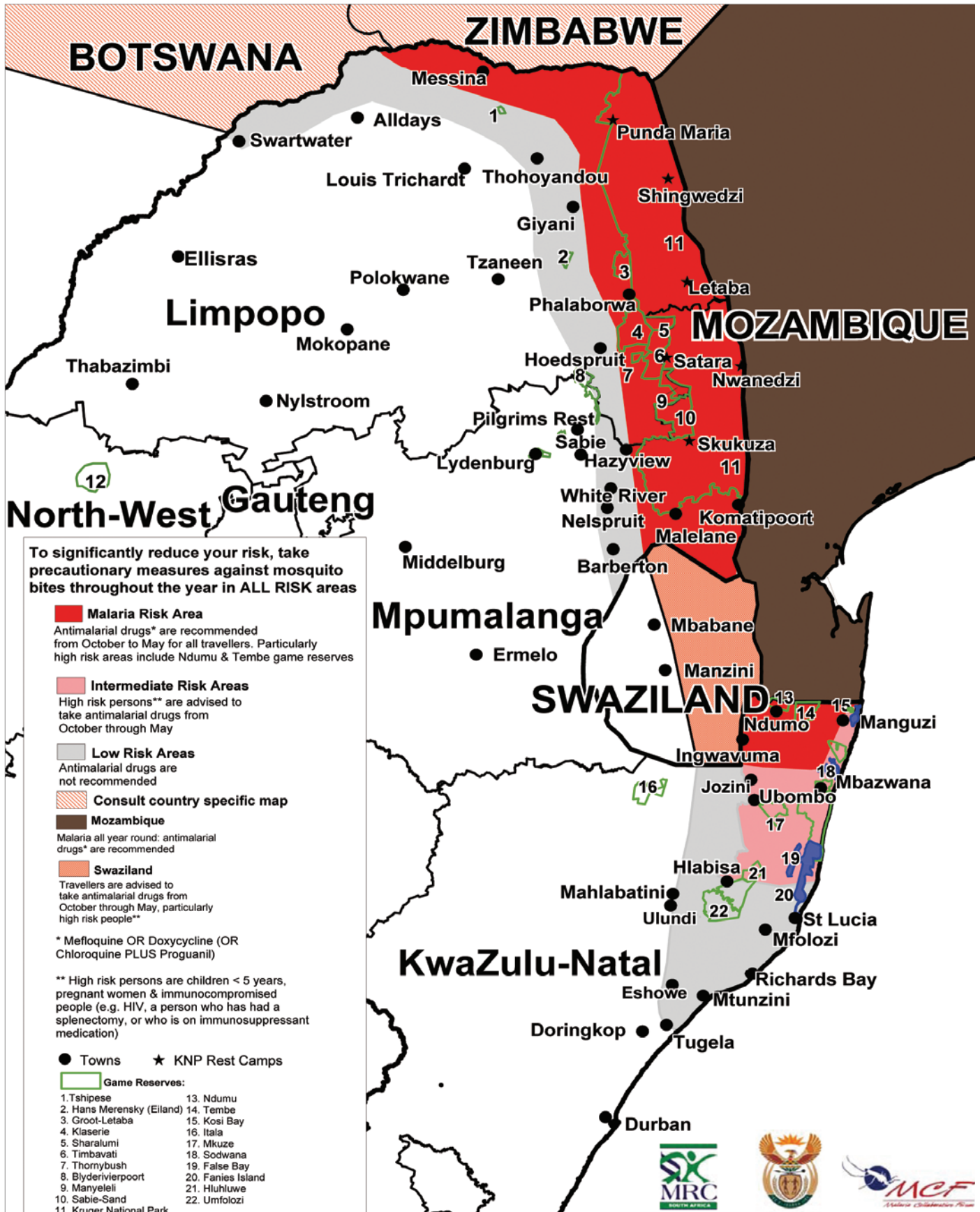
This usually happens 10 days to 4 weeks after being bitten by a mosquito in an area with malaria, but can also happen up to one year later.

Sometimes even after a person recovers from malaria the germs that cause malaria may still remain in the body and, after a short period of time, may make the person sick again. This is called relapsing malaria.

How does a person know if someone has malaria?

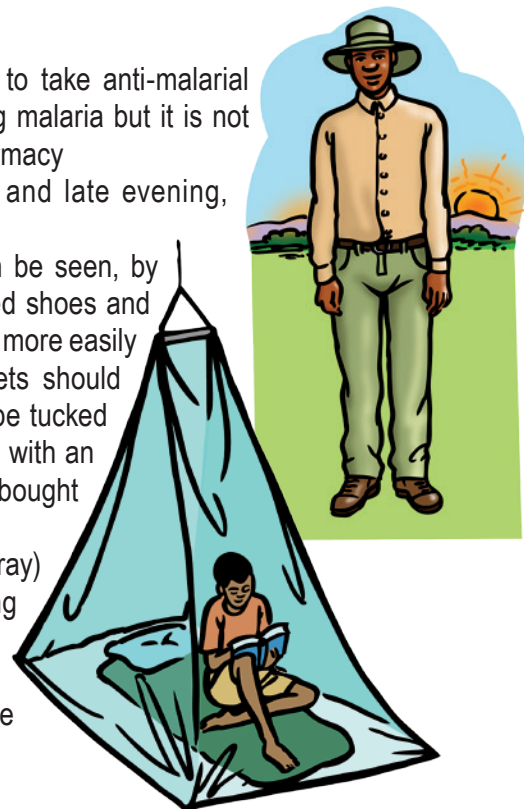
If the client has any of the above signs and lives in or has travelled to areas where there is malaria, then they need to go to the local clinic as soon as possible. They may be sent to the hospital to get tested for malaria. The finger is pricked with a needle and a drop of blood is taken from the finger. The doctor or healthcare worker will look at this drop of blood under the microscope to see if there are any germs that cause malaria.

MAP OF MALARIA ENDEMIC AREAS



3. How can malaria be prevented?

- If anyone is planning to travel to a malaria area it is better to take anti-malarial medicine. This is special medicine to stop people from getting malaria but it is not available from the clinic. However it can be bought from a pharmacy
- They need to avoid being outdoors during early morning and late evening, when the mosquitoes are most active
- They need to cover the body completely so that no skin can be seen, by wearing long-sleeved shirts, long pants, socks, boots or closed shoes and hats. They should not wear sandals because they can get bitten more easily
- Everyone should use bed nets – it is important that the nets should cover the bed. If the nets do not reach the floor, they should be tucked under mattresses. Bed nets work better when they are treated with an insecticide or a mosquito repellent. Certain bed nets can be bought with the insecticide already sprayed on them
- Insecticides should be used wherever possible – aerosol (spray) insecticides and mosquito coils to stop mosquitoes from coming into the room at night. They should be careful not to breathe in the spray fumes
- Some insect repellents have been made to be rubbed on to the skin to stop mosquitoes from biting



What can people living in a malaria area do?

- Build their houses and villages away from wet, marshy areas and rivers and dams, which are places where mosquitoes like to breed
- Make sure that all rainwater and water from drains are drained away from the house
- Put gauze screens in front of outside doors and on windows of houses
- Where water stands and cannot be drained, special medicine called larvicides can be added to the water
- Paint the inside walls of the house with non-toxic long-acting insecticides
- Sleep under bed nets, preferably ones that have been treated with an insecticide or a mosquito repellent
- All of the measures above should be used by people travelling to malaria areas as well

4. Malaria treatment

People with mild malaria will be treated with tablets but people with severe malaria will be given a drip with medicine and fluids in the hospital.

5. Is malaria a problem during pregnancy?

Yes. Malaria is very serious for a pregnant woman and her unborn baby. There may be problems with the pregnancy like the baby being born too early, low iron levels in the blood, the mother loses the baby during pregnancy and the baby not surviving during pregnancy and not being born alive. Pregnant women should always go for treatment to the clinic.

6. Is malaria a problem for children?

Yes. It is very important that all children, including young babies, who travel to areas where there is malaria, should take anti-malarial drugs. It is very important that the child gets the correct medicine and takes the correct dosage (The dosage means the amount of medicines). The dosage for a child depends on the age and weight of the child. Too much of the medicine can be very bad for a child. All anti-malarial medicines should be stored in containers that children cannot open and must be kept where the child cannot reach.

Also, it is very important to make sure that children are well covered at all times; have insect repellent rubbed onto their skin and that they sleep under bed nets.

Group Discussion

Divide into groups and discuss the following:

1. How is malaria spread?

2. What are the main signs of malaria?

3. Name and explain any 3 ways to prevent malaria.

AIM OF THE LESSON

Lesson 4.16 aims to share some important information about rabies.

Learning Outcomes

By the end of this lesson learners should be able to:

- Show basic knowledge of what rabies is, signs and symptoms and how it is spread
- Show knowledge of prevention measures such as immunisation of animals
- Explain the signs that would tell a person that an animal may have rabies

Lesson Contents

Definition of rabies, signs and symptoms and how it is spread

- What is rabies
- Signs and symptoms of rabies
- How rabies is spread

References

- A.D.A.M. Medical Encyclopaedia. Available from:
<http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0002310/>
- KwaZulu-Natal Department of Health. Rabies. South Africa. Undated. Available from:
<http://www.kznhealth.gov.za/rabies.pdf>

Your role as a CCG

Your role as a CCG is to explain to your clients what rabies is; the signs and symptoms for rabies and how rabies can be prevented by making sure that their pets are vaccinated against rabies once a year. You should talk to your clients about the importance of making sure that if people think they have rabies, they go to the clinic as soon as possible.

1. What is rabies

Rabies is a deadly infection that is mainly spread by infected animals, e.g. dogs, but also cats, bats and other sick animals. Rabies is spread when an animal bites the person and the saliva (spit) enters the person's body. Most rabies cases occur in children because they are not careful and they touch strange animals. Children should be told not to touch or play with animals they do not know.

Dog bites are a common cause of rabies in South Africa. Other wild animals that can spread the rabies are:

- Mongooses
- Meerkats
- Bats



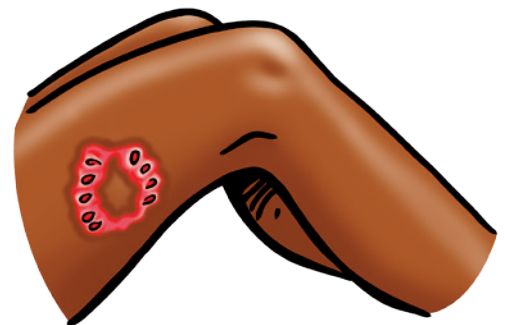
Handy Hints

The actual time it takes between when a person gets infected and when a person gets sick is called the 'incubation period'. It can take from 10 days – 7 weeks before a person shows signs of sickness. However, in most cases, it takes between 3 – 7 weeks before a person shows any signs of sickness.

2. Signs and symptoms of rabies

Signs and symptoms may include:

- Feeling anxious and irritable
- Drooling (spit running out of mouth)
- Convulsions (fits)
- A tingling feeling in the place where the person was bitten
- The body feels numb
- Muscles feel as though they don't work properly
- A light fever
- Muscle spasms (the muscles pull tight and it can be painful)
- Pain at the site of the bite
- Restlessness
- Difficulty in swallowing and fear of water



3. Tests for rabies

If an animal bites someone, they need to try to find out the type of animal and other information like where it comes from so they can tell the healthcare worker and the animal doctor (vet). If the animal belongs to someone, they should ask the owner if they have given it injections against rabies. Call the municipality to find out where the local vet is. The vet will help check the animal for rabies.

A test can be used to check for rabies in people, using a piece of skin from the neck. Doctors can also look for rabies in the client's saliva or fluid from the spine, although they may need to repeat these tests.

4. Treatment for rabies

The wound needs to be washed very well with soap, and a lot of water. This needs to be repeated at least two times. After cleaning the wound, the person should report to the clinic as soon as possible. The healthcare worker will thoroughly clean the wound again and remove any dirt that may be stuck in the wound. Most of the time, stitches will not be used for animal bite wounds because they can become infected and the infected fluid needs to be drained out of the wound.

If there is any risk of rabies, the person will be given five injections to prevent rabies. These injections should start on the day the person is bitten. The healthcare worker will tell the person when to come back for the rest of the injections. It is very important that the client goes back to the clinic for the rest of the injections according to when the healthcare worker tells them to come back.

- If the animal is domestic and is known to the person and is still alive and healthy after 10 days, they may then stop the injections. Most times, bites from wild animals will require all five injections
- Antibiotics will be given to prevent infection of the bite wound. Antibiotics are medicines which help the body fight the germs



Handy Hints

- Vaccinate domestic animals (dogs and cats) against rabies
- Know the signs and symptoms of rabies
- Remember to wash any bite and GO to the clinic

5. Prevention of rabies

To help prevent rabies:

- A person should not go near or touch animals that they do not know
- People who work in a job where they may get bitten (e.g. a postman) should get vaccinated
- A person should make sure that their pets receive the proper inoculation to stop them from getting rabies
- Dogs and cats should get rabies vaccinations from 4 months of age, and repeated every year after that

6. Signs and symptoms of a rabid animal

Animals that have rabies may show the following signs and symptoms:

- Foaming at the mouth
- Mean and fierce behaviour

However in some cases infected animals can be very calm and tame so people should be careful not to stay near or get bitten by animals that they do not know.



Module 4

Infectious Diseases

Case Study



Nkosinathi, a 40 year old male works in Johannesburg and his home is in rural KZN. This area of KZN gets lots of summer rain and is very popular with local hunters as there is lots of game. It has been raining for five days now and as a result many homes and animals have been lost and local water supply has been damaged. There are also many mosquitoes around at this time of the year.

His wife, Nontu, stays at home and looks after their two little boys who are uncircumcised and Nkosinathi's elderly mother. The grandmother has been coughing, sweating at night and has a poor appetite for food. Nontu is worried about her mother-in-law and wonders if her children will catch what is making their grandmother sick. Nkosinathi's youngest brother, Jabu, breeds hunting dogs and sells them locally in order to assist at home. The dogs have not been vaccinated in the past 12 months.

Nontu has noticed a vaginal discharge and has experienced pain when passing urine and as well as lower abdominal pain. Nkosinathi has been trying to fight off a flu that he has had for the past 4 weeks. Nontu told Nkosinathi that she will have to go to the clinic for some medicine. When Nontu returns from the clinic, she tells Nkosinathi that she was treated for an STI and that the healthcare worker at the clinic has asked that he also come in to be checked for an STI and that they both should have HIV tests. Nkosinathi gets angry and says that he doesn't understand why he should go to the clinic.

The CCG, Bongani, provides services and assistance to this household.

Module 4

Infectious Diseases

Case Study

Divide into groups and role play the following:

1. Based on the case study, what should Bongani discuss with the family?

2. How should Bongani decide what he needs to discuss with them first and how should he plan his visits?

Visit 1:

Bongani visits the home a few days after this has happened.

1. What should Bongani discuss with Nkosinathiso that he can understand and accept why it is necessary for him to go to the clinic to be checked for an STI?

2. What tool could Bongani use to help him?

3. Practice using this tool and based on the information from the case study, what should Bongani recommend to Nkosinathi?

4. Why should Nontu and Nkosinathi have an HIV test?

Module 4

Infectious Diseases

Case Study

5. What tool could Bongani use to help him encourage them to have the test?

6. Practice using this tool and based on the above information, what should Bongani recommend to Nontu and Nkosinathi?

7. What should Bongani say to them about trying not to pass the infection from one person to another?

8. What else can Bongani leave behind to help them with this?

Nontu tells Bongani that she was very scared when she went to the clinic as she did not know what to expect. She tells him that she is worried that this may happen again and asks him to explain to her what will happen at the clinic if she goes for an HIV test.

9. What should Bongani tell Nontu and Nkosinathi about couples counselling and why it is important?

10. Using the HCT Care Pathway, practice explaining to Nontu and Nkosinathi what the process is and what they should expect when they go to the clinic for HIV tests.

Module 4

Infectious Diseases

Case Study

When Bongani speaks to the grandmother about her symptoms, she tells him that she has been coughing for the last few weeks.

11. What illness should Bongani consider when he listens to the grandmother about her symptoms?

12. Based on the information in the case study, what should Bongani recommend to the grandmother?

13. Are there special precautions the family should take to lower their risk of catching this illness? If so, explain what these are.

14. What screening tool should Bongani use to motivate the family to be tested as well?

15. What should Bongani tell Nontu about making sure her children, herself and her husband do not catch this illness?

Bongani sees the wet marshy land and the water running past the broken toilet. He also notices the mosquitoes.

16. What illnesses that could appear because of the conditions in the environment and time of year should Bongani be discussing with the family? What should Bongani be telling them about how to prevent getting these illnesses?

Module 4

Infectious Diseases

Case Study

After talking to Bongani, Nontu is worried that the family is using dirty water. Bongani shows Nontu how to clean and disinfect the water.

17. How should Bongani show Nontu how to clean the water:

- for drinking

- for washing hands, etc.

18. What should Bongani be discussing with Jabu regarding his dogs?

19. What other information should Bongani be discussing with Jabu?

20. Based on previous modules, what other screening tools could Bongani use with the family?

21. Should Bongani follow up with the family again?

- When should he follow up with them?

- Who should he follow up with?

- What should he be following up on with every one of them?

- What actions should Bongani take if his suggestions have not been followed?

Module 4

Infectious Diseases

Case Study

Visit 2:

At Bongani's next visit, Nontu tells him that she and Nkosinathi have been to the clinic and that they have both had HIV tests. During the counselling, HIV and AIDS, PMTCT and HCT were explained to them and he, Nkosinathi, admitted that he had a girlfriend in Johannesburg. Nontu tells Bongani that both of them are HIV-positive and both have had CD4 cell count tests done. Nkosinathi is scared to tell his mother about his HIV status. His mother often says that 'anyone who has HIV and AIDS deserves it as they are being punished for their wrong doings'.

1. Is this statement true: 'Anyone who has HIV and AIDS deserves it as they are being punished for their wrong doings'? Please explain your answer.

2. How can Bongani assist the couple and the family to handle the stigma related to HIV?

3. What other support could be available to the couple/family?

4. Help Nkosinathi to practice disclosing to his girlfriend his HIV status.

When Bongani asks, Nkosinathi tells Bongani that he and Nontu have not gone back for their CD4 cell count test results. They do not know why they need to go back as they did not completely understand why they had CD4 cell count tests done.

5. What should Bongani tell them about why it is important that they go back to the clinic to get the test results?

6. Explain what a CD4 cell count test is and why it is important.

Module 4

Infectious Diseases

Case Study

Nontu also tells Bongani that she is pregnant and she is worried that the baby will be born with HIV.

7. What should Bongani discuss with Nontu about her pregnancy? (Use information from previous modules as well).

8. Using the PMTCT Care Pathway, practice explaining to Nontu what care she should expect for herself and her baby.

9. What important subjects should Bongani discuss with Nontu and Nkosinathi about staying healthy? (Use information from previous modules as well).

Nkosinathi tells Bongani that he saw posters about circumcision at the clinic and he was wondering if he should think about having one.

10. What should Bongani tell Nkosinathi about circumcision for himself?

11. Are there other family members who would benefit from circumcision? If so, which ones and why?

Module 4

Infectious Diseases

Case Study

12. Should Bongani follow up with the family again?

- When should he follow up with them?

- Who should he follow up with?

- What should he be following up on with every one of them?

- What actions should Bongani take if his suggestions have not been followed?

Visit 3:

When Bongani goes back to the household, he notices that the younger child is vomiting. Nontu tells him that he has also been complaining of cramps in his legs.

1. What should Bongani tell Nontu to do?

2. Is there anything that can be done at home to treat the child? If so, explain what it is and how to do it?

Nontu also tells Bongani that she and Nkosinathi have gone back to the clinic for their CD4 cell count test results and that her CD4 cell count is 410 and Nkosinathi's is 320.

She asks Bongani to explain this to her.

3. What does Bongani tell her about her CD4 cell count?

Module 4

Infectious Diseases

Case Study

4. What does it mean for her pregnancy?

5. What does Nkosinathi's CD4 cell count test result mean?

Nkosinathi asks Bongani to explain to him the process for him to get ARVs.

6. Using the ARV Therapy Care Pathway, practice explaining what the process is and what he should expect when he goes to the clinic for his ARVs.

7. Explain the importance of adherence to treatment (ARVs, TB, etc).

8. Should Bongani follow up with the family again?

- When should he follow up with them?

- Who should he follow up with?

- What should he be following up on with every one of them?

- What actions should Bongani take if his suggestions have not been followed?

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Infectious Diseases

Case Study

Visit 4:

1. How should Bongani check if Nkosinathi is adhering to his ARV medicines?

2. What tool could Bongani use to help him?

3. Practice using this tool and based on the above information, what should Bongani recommend to Nkosinathi?

4. Should Bongani follow up with the family again?

- When should he follow up with them?

- Who should he follow up with?

- What should he be following up on with every one of them?

- What actions should Bongani take if his suggestions have not been followed?

Module 4

Infectious Diseases

Case Study

5. What should Bongani discuss with the youngest brother and other youth in the family around prevention?

6. As a CCG working in this community, what are other points of discussion or services can you recommend to help the family?
