• **What is HIV?** Ans: HIV stands for 'Human Immunodeficiency Virus'. HIV is a retrovirus that infects cells of the human immune system (mainly CD4 positive T cells and macrophages–key components of the cellular immune system), and destroys or impairs their function. Infection with this virus results in the progressive depletion of the immune system, leading to 'immune deficiency'.

The immune system is considered deficient when it can no longer fulfill its role of fighting off infection and diseases. Immunodeficient people are much more vulnerable to a wide range of infections, most of which are very rare among people without immune deficiency. Diseases associated with severe immunodeficiency are known as 'Opportunistic infections', because they take advantage of a weakened immune system.

• **What is AIDS? Ans**: AIDS stands for 'Acquired Immunodeficiency Syndrome' and describes the collection of symptoms and infections associated with acquired deficiency of the immune system. Infection with HIV has been established as the underlying cause of AIDS. The level of HIV in the body and the appearance of certain infections are used as indicators that HIV infection has progressed to AIDS

• **What are the Symptoms of HIV? Ans**: Most people infected with HIV do not know that they have become infected, because no symptoms develop immediately after the initial infection. Some people have a glandular fever–like illness (with fever, rash, joint pains and enlarged lymph nodes), which can occur at the time of seroconversion. Seroconversion refers to the development of antibodies to HIV and usually takes place between 6 weeks and 3 months after an infection has occurred.

Despite the fact that HIV infection does not cause any initial symptoms, an HIV–infected person is highly infectious and can transmit the virus to another person. The only way to determine whether HIV is present in a person's body is by taking an HIV test.

HIV infection causes a gradual depletion and weakening of the immune system. This results in an increased susceptibility of the body to infections and can lead to the development of AIDS

• **When does a person have AIDS? Ans**: The term AIDS applies to the most advanced stages of HIV infection. The majority of people infected with HIV, if not treated, develop signs of AIDS within 8–10 years. AIDS is identified on the basis of certain infections, grouped by the World Health Organization:

Stage I HIV disease is asymptomatic and not categorized as AIDS

Stage II (includes minor mucocutaneous manifestations and recurrent upper respiratory tract infections)

Stage III (includes unexplained chronic diarrhoea for longer than a month, severe bacterial infections and pulmonary tuberculosis) or

Stage IV (includes Toxoplasmosis of the brain, Candidiasis of the oesophagus, trachea, bronchi or lungs and Kaposi's Sarcoma) HIV disease are used as indicators of AIDS.

Most of these conditions are opportunistic infections that can be treated easily in healthy people.

In addition, the Centers for Disease Control and Prevention (CDC) defines AIDS on the basis of a CD4 positive T cell count of less than 200 per mm3 of blood.

CD4 positive T cells are critical in mounting an effective immune response to infections.

WHO's recommendations for the start of antiretroviral (ARV) therapy are based on the above–mentioned definitions. WHO recommends that HIV–infected adolescents and adults with these infections and/or a T cell count of 200 per mm3 start antiretroviral therapy.

- **How quickly do people infected with HIV develop AIDS? Ans**: The length of time can vary widely between individuals. With a healthy lifestyle, the time between infection with HIV and becoming ill with AIDS can be 10–15 years, sometimes longer. Antiretroviral therapy can slow down the progression of AIDS by decreasing viral load in an infected body.

- **Where is HIV found? Ans**: HIV can be found in body fluids such as blood, semen, vaginal fluids, cerebro – spinal fluid and breast milk.
- **How can HIV be transmitted? Ans**: HIV is transmitted through penetrative (anal or vaginal) and oral sex; blood transfusion; the sharing of contaminated needles in health care settings and through drug injection; and, between mother and infant, during pregnancy, childbirth and breastfeeding.
- **How can HIV be transmitted through sexual activities? Ans**: HIV can be transmitted through unprotected penetrative sex. It is difficult to calculate the odds of becoming infected through sexual intercourse, however it is known that the risk of infection through vaginal sex is high. Transmission through anal sex has been reported to be 10 times higher than by vaginal sex. A person with an untreated sexually transmitted infection (STI), particularly involving ulcers or discharge, is, on average, 6–10 times more likely to pass on or acquire HIV during sex.

Oral sex is regarded as a low–risk sexual activity in terms of HIV transmission. Risk can increase if there are cuts or sores around or in the mouth and if ejaculation occurs in the mouth.

- **How can needles and syringes transmit HIV infection? Ans**: Re–using or sharing needles or syringes represents a highly efficient way of transmitting HIV. The risk of transmission can be lowered substantially among injecting drug users by using new needles and syringes that are disposable or by properly sterilizing reusable needles/syringes before reuse. Health–care workers adhering to Universal Precautions can lower transmission in a health–care setting.
- **How can HIV be transmitted from Mother–to–child (MTCT)? Ans**: HIV can be transmitted to an infant during pregnancy, labour, delivery and breastfeeding. Generally, there is a 15–30% risk of transmission from mother to child before and during delivery. A number of factors influence the risk of infection, particularly the viral load of the mother at birth (the higher the load, the higher the risk). Transmission from mother to child after birth can also occur through breastfeeding. Breastfeeding increases the risk of transmission by 10–15%. This risk depends on clinical factors and may vary according to the pattern and duration of breastfeeding.

• **How does HIV get transmitted through blood transfusion? Ans**: There is a high risk (greater than 90%) of acquiring HIV through transfusion of infected blood and blood products. However, the implementation of blood safety standards ensures the provision of safe, adequate and good–quality blood and blood products for all patients requiring transfusion. Blood safety includes screening of all donated blood for HIV and other blood–borne pathogens, as well as appropriate donor selection.

• **How can HIV not be transmitted? Ans**: HIV is not spread by shaking hands with an infected person, traveling in the same auto, taxi or bus, eating from the same plate, drinking from the same glass, sporting, hugging and kissing. Mosquitoes and other insects do not spread the virus, neither does it spread through water or air.

HIV also does not spread by:

- Using toilets and urinals used by infected persons.
- Through sneezing or coughing
- Working with an infected person
- Giving blood for blood donation when medical staff uses disposable instruments

• **What is the risk of getting HIV from kissing or deep kissing? Ans**: Transmission through kissing on the mouth carries a very low risk, and no evidence has been found that the virus is spread through saliva by kissing.

• **What is the risk of getting HIV through body piercing or from a tattoo? Ans**: A risk of HIV transmission does exist if contaminated instruments are either not sterilized or are shared with others. Instruments that are intended to penetrate the skin should be used once, then disposed of or thoroughly cleaned and sterilized.

• **What is the risk of getting HIV from sharing razors with an infected person? Ans**: Any kind of cut using an unsterilized object, such as a razor or knife, can transmit HIV. Sharing razors is not advisable, unless they are fully sterilized after each use.

• **Does HIV only affect homosexuals and drug users? Ans**: No. Anyone who has unprotected sex, shares injecting equipment, or has a transfusion with contaminated blood can become infected with HIV. Infants can be infected with HIV from their mothers during pregnancy, during labour or after delivery through breastfeeding.

Ninety per cent of HIV cases are the result of sexual transmission and 60–70% of HIV cases occur among heterosexuals.

• **Can you tell someone has HIV just by looking at them? Ans**: You cannot tell if someone has HIV or AIDS by just looking at them. A person infected with HIV may look healthy and feel good, but they can still pass the virus to you. A blood test is the only way a person can find out if he or she is infected with HIV.

• **How can one prevent becoming infected with HIV during sex? Ans**: One can prevent an infection with HIV by having no sex, by having a mutually faithful monogamous sexual relationship with an uninfected partner and by practicing safer sex. Sex can be made safer by engaging in non–penetrative sex or by consistently and correctly using a male and/or female condom every time.

• **How effective are condoms in preventing HIV? Ans**: products currently available to protect against sexual infection by HIV and other sexually transmitted infections (STIs). When

used properly, condoms are a proven and effective means of preventing HIV infection in women and men.

However, no protective method is 100% effective, and condom use cannot guarantee absolute protection against any STI. In order to achieve the protective effect of condoms, they must be used correctly and consistently. Incorrect use can lead to condom slippage or breakage, thus diminishing their protective effect.

• **What is a female condom? Ans**: The female condom is the first and only female–controlled contraceptive barrier method. The female condom is a strong, soft, transparent polyurethane sheath inserted in the vagina before sexual intercourse. It entirely lines the vagina and, therefore, with correct and consistent use, provides protection against both pregnancy and STIs. The female condom has no known side–effects or risks and does not require a prescription or the intervention of a health–care provider.

• **How do you use a female condom? Ans**: Carefully remove the condom from its protective pouch. Add extra lubricant, if desired, to the inner and outer rings of the condom. To insert the condom, squat down, sit with your knees apart, or stand with one foot on a stool or low chair. Hold the condom with the open end hanging down. While holding the top ring of the pouch (the closed end of the condom) squeeze the ring between your thumb and middle finger.

Now place your index finger between your thumb and middle fingers. With your fingers in this position, keep the top of the condom squeezed in a flat oval. Use your other hand to spread the lips of your vagina and insert the closed end of the pouch.

Once you have inserted the closed end of the pouch, use your index finger to push the pouch the rest of the way up into your vagina. Check to be certain that the top of the pouch is up past your pubic bone, which you can feel by curving your index finger upwards once it is a few inches inside your vagina. You can insert the pouch up to eight hours before your have intercourse.

Make sure that the condom is not twisted inside your vagina. If it is, remove it, add a drop or two of lubricant, and re–insert. Note: About one inch of the open end of the condom will remain outside your body. If your partner inserts his penis underneath or alongside the pouch, ask him to withdraw immediately. Remove the condom, discard it, and use a new pouch. Until you and your partner become familiar with the female condom, it will be helpful if you use your hand to guide his penis into your vagina.

After your partner ejaculates and withdraws, squeeze and twist the open end of the pouch to keep the sperm inside. Pull out gently. Dispose of the used condom (but do not throw it down the toilet).

The re–use of female condoms is not recommended.

• **How can injecting drug users reduce their risk of contracting HIV? Ans**: For injecting drug users, certain steps can be taken to reduce personal and public health risks:

- Take drugs orally (changing from injecting to non–injecting drug use).
- Never re–use or share syringes, water or drug–preparation equipment.

- Use a new syringe (obtained from a reliable source, e.g. a chemist or via a needle–exchange programme) to prepare and inject drugs each time.
- When preparing drugs, use sterile water or clean water from a reliable source.
- Using a fresh alcohol swab, clean the injection site prior to injection.

• **How can mother–to–child transmission (MTCT) be prevented? Ans: Mother–to–child transmission can be reduced by the following:**

Treatments

It is clear that short–term antiretroviral preventative treatment is an effective and feasible method of preventing mother–to–child transmission of HIV. When combined with infant–feeding counselling and support, and the use of safer infant–feeding methods, it can halve the risk of infant infection. ARV regimens are mainly based on the use of Nevirapine or Zidovudine. Nevirapine is administered in one dose to the mother at delivery, and in one dose to the child within 72 hours of birth. Zidovudine has been shown to decrease the risk of transmission when administered to the mother during the last six months of pregnancy and intravenously during labour and to the baby for six weeks after birth. Even if Zidovudine is administered later in pregnancy, or around the time of delivery, the risk of transmission can be halved. Overall, the efficacy of the various drug regimens is diminished if babies continue to be exposed to HIV through breastfeeding.

Antiretroviral drugs should only be taken under medical supervision.

Caesarian section

A Caesarian section is a surgical procedure whereby the baby is delivered through an incision in the mother‘s abdominal wall and uterus. Of the babies who are infected through mother–to–child transmission, it is believed that about two–thirds are infected during pregnancy and around the time of delivery. Vaginal deliveries are more likely to increase the risk of mother–to–child transmission, while elective Caesarian sections have been shown to reduce the risk. However, the potential benefits have to be balanced against the risk to the mother.

Avoiding breastfeeding

The risk of transmission from mother to child is increased when the child is breastfed. Although breast milk is considered the best nutrition for a child, it is recommended that HIV–positive mothers replace breast milk with infant formula to reduce the risk of transmission to the child. However, this is advisable only if it covers the child‘s nutritional requirements, if it can be prepared under hygienic conditions and if it is affordable for the families.

WHO makes the following recommendations:

- When replacement feeding is acceptable, feasible, affordable, sustainable and safe, avoiding breastfeeding by HIV–infected mothers is recommended. Otherwise, exclusive breastfeeding is recommended during the first months of life and should be discontinued as soon as possible.

• **What procedures should health–care workers follow to prevent transmission in health–care settings? Ans**: Health–care workers should follow Universal Precautions. Universal Precautions are infection–control guidelines, developed to protect health workers and

their patients from exposure to diseases spread by blood and certain body fluids.

Universal Precautions include:

- careful handling and disposal of 'sharps'(items that could cause cuts or puncture wounds, including needles, hypodermic needles, scalpel and other blades, knives, infusion sets, saws, broken glass, and nails)
- hand–washing with soap and water before and after all procedures;
- use of protective barriers such as gloves, gowns, aprons, masks and goggles when in direct contact with blood and other body fluids;
- safe disposal of waste contaminated with blood or body fluids;
- proper disinfection of instruments and other contaminated equipment and
- proper handling of soiled linen.

In addition, it is recommended that all health–care workers take precautions to prevent injuries caused by needles, scalpels and other sharp instruments or devices. In accordance with universal precautions, blood and body fluids from all persons are considered as infected with HIV, regardless of the known or supposed status of the person.

• **Is it safe for two infected individuals to engage in unprotected sex exclusively with each other?** **Ans**: No, it is not safe for two HIV–infected individuals to have unprotected sex with each other as re–infection with other types of HIV and the transmission of other sexually transmitted infections (STIs) can occur. Use of condoms is advised even when both partners are infected.

• **What is an HIV test?** **Ans**: An HIV test is a test that reveals whether HIV is present in the body. Commonly–used HIV tests detect the antibodies produced by the immune system in response to HIV, as they are much easier (and cheaper) to detect than the virus itself. Antibodies are produced by the immune system in response to an infection.

For most people, it takes three months for these antibodies to develop. In rare cases, it can take up to six months.

• **How long after possible exposure should I wait to be tested for HIV?** **Ans**: Generally, it is recommended that you wait three months after possible exposure before being tested for HIV. Although HIV antibody tests are very sensitive, there is a 'window period' of 3 to 12 weeks, which is the period between infection with HIV and the appearance of detectable antibodies to the virus. In the case of the most sensitive anti–HIV tests currently recommended, the window period is about three weeks. This period may be longer if less sensitive tests are used.

During the window period, people infected with HIV have no antibodies in their blood that can be detected by an HIV test. However, the person may already have high levels of HIV in their body fluids such as blood, semen, vaginal fluids and breast milk. HIV can be passed on to another person during the window period even though an HIV test may not show that you are infected with HIV.

• **What are the benefits of testing for HIV?** **Ans**: The following are the advantages of HIV testing:

A person known to be HIV positive can start treatment on time and can continue to lead a normal and healthy life for several years.

A person knowing his/her positive status can take precautions to avoid transmitting the virus

to others.

Measures can be taken to prevent the transmission of the virus from an HIV positive mother to her child.

If a person is tested negative, he or she can be counseled and informed about ways of preventing HIV.

The psychological impact of knowing one's positive status is often traumatic. Hence, pre–and post–test counseling play a critical role in ensuring people that they can lead normal and healthy lives with proper treatment and care.

• **What are the different tests for HIV? Ans**: There are three most commonly used tests for HIV. These are based on measuring antibodies.

Spot Test: This is the most commonly used test. A positive test means the person is suspected of being infected with HIV. It is not a confirmatory test for HIV.

ELISA: This is an inexpensive and effective test for HIV. If a person tests positive in two consecutive ELISA tests, it is considered confirmed.

Western Blot: This is considered as the Gold Standard for testing HIV antibodies. One confirmation on Western Blot is equivalent of a third positive test by ELISA.

• **Where can I get tested? Ans**: There are many places where you can be tested for HIV: a local Diagnostic laboratory, Government hospitals, family planning clinics and VCCTC sites specifically set up for HIV testing. Always try to find testing at a place where counselling is provided about HIV/AIDS.

• **Are my test results confidential? Ans**: All people taking an HIV test must give informed consent prior to being tested. The results of the test must be kept absolutely confidential.

There are different types of testing available:

Confidential HIV test: the medical professionals handling the HIV test keep the result of the test confidential within the medical records. Results cannot be shared with another individual unless written permission is provided by the person tested.

Anonymous HIV test: the tested person‘s name is not used in connection with the test. Instead, a code or number is assigned to the test, which allows the individual being tested to receive the results of the test. No records are kept that would link the person to the test.

Shared confidentiality is encouraged and refers to confidentiality that is shared with others that might include family members, loved ones, caregivers, and trusted friends. However, care should be taken when revealing the results as it can lead to discrimination in healthcare, professional and social settings. Shared confidentiality is therefore at the discretion of the person who will be tested. Although the result of the HIV test should be kept confidential, other professionals such as counsellors and health and social service workers might also need to be aware of the person‘s HIV–positive status in order to provide appropriate care.

• **What do I do if I have HIV? Ans**: Thanks to new treatments, many people with HIV are living longer, healthier lives. It is very important to make sure you have a doctor who knows how

to treat HIV. A health–care professional or trained HIV counsellor can provide counselling and help you to find an appropriate doctor.

In addition, you can do the following to stay healthy:

- Follow your doctor‘s instructions. Keep your appointments. If you doctor prescribes medicine for you, take it exactly as prescribed.
- Get immunizations (shots) to prevent infections such as pneumonia and flu (after consultation with your physician).
- If you smoke or if you use drugs not prescribed by your doctor, quit.
- Eat healthy foods.
- Exercise regularly to stay strong and fit.
- Get enough sleep and rest.

• **Is there a cure for HIV/AIDS? Ans**: No, there is no cure for HIV/AIDS. Progression of the disease can be slowed down but cannot be stopped completely. The right combination of antiretroviral drugs can slow down the damage that HIV causes to the immune system and delay the onset of AIDS.

• **What sort of care and treatment is available? Ans**: Treatment and care consist of a number of different elements, including voluntary counselling and testing (VCT), support for the prevention of onward transmission of HIV, follow–up counselling, advice on food and nutrition, treatment of STIs, management of nutritional effects, prevention and treatment of opportunistic infections (OIs), and the provision of antiretroviral drugs.

• **What are antiretroviral drugs? Ans**: Antiretroviral drugs are used in the treatment of HIV infection. They work against HIV infection itself by slowing down the reproduction of HIV in the body.

• **How do antiretroviral drugs work? Ans**: Inside an infected cell, HIV produces new copies of itself, which can then go on to infect other healthy cells within the body. The more cells HIV infects, the greater its impact on the immune system (immunodeficiency). Antiretroviral drugs slow down the replication and, therefore, the spread of the virus within the body, by interfering with its replication process in different ways.

Nucleoside Reverse Transcriptase Inhibitors:

HIV needs an enzyme called reverse transcriptase to generate new copies of itself. This group of drugs inhibits reverse transcriptase by preventing the process that replicates the virus‘s genetic material.

Non–Nucleoside Reverse Transcriptase Inhibitors:

This group of drugs also interferes with the replication of HIV by binding to the reverse transcriptase enzyme itself. This prevents the enzyme from working and stops the production of new virus particles in the infected cells.

Protease Inhibitors:

Protease is a digestive enzyme that is needed in the replication of HIV to generate new virus particles. It breaks down proteins and enzymes in the infected cells, which can then go on to infect other cells. The protease inhibitors prevent this breakdown of proteins and therefore slow down the production of new virus particles.

Other drugs that inhibit other stages in the virus‘s cycle (such as entry of the virus and fusion with an uninfected cell) are currently being tested in clinical trials.

• **Are antiretroviral drugs effective? Ans**: The use of ARVs in combinations of three or more drugs has been shown to dramatically reduce AIDS–related illness and death. While not a cure for AIDS, combination ARV therapy has enabled HIV–positive people to live longer, healthier, more productive lives by reducing viraemia (the amount of HIV in the blood) and increasing the number of CD4+ cells (white blood cells that are central to the effective functioning of the immune system).

For antiretroviral treatment to be effective for a long time, different antiretroviral drugs need to be combined. This is what is known as combination therapy. The term 'Highly Active Anti–Retroviral Therapy' (HAART) is used to describe a combination of three or more anti–HIV drugs.

If one drug is taken on its own, it has been found that, over a period of time, changes in the virus enable it to build up resistance to the drug. The drug is then no longer effective and the virus starts to reproduce to the same extent as before. If two or more antiretroviral drugs are taken together, the rate at which resistance develops can be reduced substantially. Usually, the combination consists of two drugs that inhibit the reverse transcriptase enzyme and one protease inhibitor.

Antiretroviral drugs should only be taken under medical supervision.

• **What is the current status of ARV treatment? Ans**: In developing countries, only about 15% of those in need are receiving anti–retrovirals, while there is near universal access in high–income countries. Until recently, the high cost of the medicines, inadequate health care infrastructure and lack of financing has prevented wide use of combination ARV treatment in low– and middle–income countries, however, increased political and financial commitment in recent years, stimulated by people living with HIV, civil society and other partners has, has enabled a dramatic expansion of access to HIV therapy.

In 2002, 12 ARV medicines were included in the WHO Model List of Essential Medicines. These additions to the list were made after careful analysis of evidence of ARV efficacy in developing countries, which shows that these medicines can be used effectively and safely in these settings.

• **What kind of care is available when ARVs are not accessible? Ans**: Other elements of care can help maintain a high quality of life when ARVs are not available. These include adequate nutrition, counselling, prevention and treatment of opportunistic infections, and generally staying healthy.

• **What is PEP? Ans**: Post–exposure prophylaxis (PEP) treatment consists of medication, laboratory tests and counselling. PEP treatment must be initiated within hours of possible HIV exposure and must continue for a period of approximately four weeks. PEP treatment has not been proven to prevent the transmission of HIV. However, research studies suggest that, if the medication is initiated quickly after possible HIV exposure (ideally within two hours and not later than 72 hours following such exposure), it may be beneficial in preventing HIV infection.

• **When you are on antiretroviral therapy, can you transmit the virus to others? Ans**: Antiretroviral therapy does not prevent an infected person from passing on the virus to others. Therapy can keep viral load down to undetectable levels, but HIV is still present in the body and can be transmitted to others through sexual contact, by sharing injecting equipment, or by

mothers breastfeeding their infants

• **Why are women more vulnerable than men to HIV? Ans**: Women's vulnerability to HIV is increased because of "Dual–vulnerability.' Primarily, women are more vulnerable to HIV than men biologically. The surface area of the vagina (women's sexual organ) is more than the penis head (men's sexual organ).

Secondarily, the social marginalization of women makes them more vulnerable. Less literacy, as well as economic and social dependency on men provides women with less opportunity to know more about the infection and mean they have less access to services. Other circumstances such as sexual exploitation, rape, domestic violence and sex work also make them more vulnerable than men.

• **Do people living with HIV have special rights or responsibilities? Ans**: Since everyone is entitled to fundamental human rights without discrimination, people living with HIV have the same rights as uninfected people – to education, employment, health, travel, marriage, privacy, social security, etc.

Uninfected and infected people share responsibility of avoiding HIV infection. However, many people, including women, children, adolescents and young people, cannot negotiate safe sex because of their marginalized status in society or their lack of personal power. Therefore, people who know they are infected have the responsibility of preventing transmission to others.

– A Special Word about Women and Girls

• **Women, especially young women and girls, are often more at risk of HIV than men. Why? Ans**:

- Because their sex organs (vaginas) can get damaged and tear more easily than a man's during sex, which makes it easier for HIV to enter their bodies. Girls and young women are especially at risk. Anal sex can cause even more tearing, making it yet easier for the virus to enter the body.
- Women and girls are often given less information about sex, reproduction and sexually transmitted infections. This means they do not always know how to keep themselves safe from HIV and other infections.
- It is often difficult for women and girls to talk to men about sex and using condoms.

Women have A RIGHT to protect themselves against sexually transmitted infections, including HIV.

Women have A RIGHT to say 'No' to sex.

Women have A RIGHT to insist that their partners use condoms.

And men have A RESPONSIBILITY to practice safe sexual behaviour in order to protect themselves, their partners and their families from HIV.