Module 1

HIV epidemiology, transmission and prevention

HIV basic knowledge and stigma reduction in health care settings
Module 1

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HIV basic knowledge and stigma reduction in health care settings

World Health Organization
Regional Office for the Eastern Mediterranean
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Introduction

This module will provide recent epidemiological data characterizing HIV infection worldwide and in the Eastern Mediterranean Region. The data should be updated every year when global epidemiological data are published. Based on the available data, facilitators should prepare slides on the epidemiological situation of the HIV infection in the country where training is to take place. The participants should also gain insights into the human immunodeficiency virus (HIV), its origin and genetic diversity.

The section on HIV transmission will focus on situations with no risk of HIV transmission in order to mitigate concerns and fears among health care personnel and to better understand situations in which contamination can occur. Better knowledge of how HIV contamination occurs will enable a more effective approach to reducing the risk in the health care environment.

Specific objectives

After completing the module, the participants should be able to:

• Discuss the epidemiological situation in the country, the Eastern Mediterranean Region and worldwide
• Present the characteristics of HIV and its transmission
• Present the means of prevention of HIV infection
• Take standard precautions in the health care environment to reduce the risk of body exposure accidents (BEA) and body fluid exposure accidents
• Respond appropriately to BEA.
Module schedule

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<tr>
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<th>Methods</th>
<th>Length</th>
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<tbody>
<tr>
<td><strong>Session 1</strong></td>
<td><strong>Epidemiology</strong></td>
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<tr>
<td></td>
<td>Section 1</td>
<td></td>
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<tr>
<td></td>
<td>Epidemiological situation of the HIV infection in the Eastern Mediterranean Region and worldwide</td>
<td>PowerPoint</td>
<td>15 minutes</td>
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<td></td>
<td>Discussion</td>
<td>10 minutes</td>
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<td>Section 2</td>
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<td></td>
<td>HIV: specificities of the virus and genetic diversity</td>
<td>PowerPoint</td>
<td>10 minutes</td>
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<tr>
<td></td>
<td></td>
<td>Discussion</td>
<td>5 minutes</td>
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<tr>
<td><strong>Session 2</strong></td>
<td><strong>Transmission and prevention</strong></td>
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<tr>
<td></td>
<td>Section 1</td>
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<tr>
<td></td>
<td>Modes of contamination by HIV</td>
<td>PowerPoint</td>
<td>20 minutes</td>
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<tr>
<td></td>
<td></td>
<td>Discussion</td>
<td>10 minutes</td>
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<tr>
<td></td>
<td>Section 2</td>
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<td></td>
<td>Prevention of HIV infection</td>
<td>Brainstorming</td>
<td>45 minutes</td>
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<td></td>
<td>Section 3</td>
<td>Questions/Answers</td>
<td>30 minutes</td>
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<td></td>
<td>Blood exposure accidents</td>
<td>PowerPoint</td>
<td>20 minutes</td>
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<tr>
<td></td>
<td></td>
<td>Discussion</td>
<td>15 minutes</td>
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<tr>
<td></td>
<td>Post-exposure prophylaxis for HIV in the care environment</td>
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**Educational tools**

- A series of slides presenting the module's goals and course documentation for session 1.
- A series of slides presenting the module's goals and course documentation for session 2.
- Paperboard and different colour markers.
Facilitators should start the module with a reminder of the goals of Module 1.
Session 1: Epidemiology

Epidemiological situation

Despite recent improvements in a number of indicators, the worldwide epidemiological situation of HIV infection is still a source of great concern. According to UNAIDS estimates, some 35 million [33.2 million – 37.2 million] people were living with HIV at the end of 2013 (Slide 6).

Although the annual number of new HIV infections worldwide fell from 3.4 million [3.3 million–3.6 million] in 2001 to 2.1 million [1.9 million–2.4 million] in 2013, and although the percentage of people living with HIV/AIDS (PLHIV) has stabilized since 2000, the number of PLHIV is nevertheless rising steadily (Slide 7), and the epidemic remains with an unacceptable level of new HIV infections and deaths from AIDS.
The number of new infections worldwide has levelled off and is showing a downward trend (Slides 8 and 9).
Deaths from AIDS also fell to 1.5 million in 2013 (Slide 10).

Sub-Saharan Africa remains the region worst affected by HIV, with nearly 25 million PLHIV at the end of 2013. At the end of 2013, the number of PLHIV in the Eastern Mediterranean Region\(^1\) was estimated at nearly 280 000. In the Middle East and North Africa region\(^2\), the number was estimated at 230 000 at the end of 2013 (Slide 11).

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\(^1\) The WHO Eastern Mediterranean Region comprises Afghanistan, Bahrain, Djibouti, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Pakistan, occupied Palestinian territory, Qatar, Saudi Arabia, Somalia, Sudan, Syrian Arab Republic, Tunisia, United Arab Emirates and Yemen.

\(^2\) The Middle East and North Africa Region comprises these same countries with the exception of Afghanistan, Pakistan and the addition of Algeria.
The prevalence of the infection in the Middle East and North Africa region is low (0.1%); however, the number of PLHIV and new infections is still rising (Slides 13 and 14).
The predominant common transmission mode throughout the region is the sexual route, especially unprotected heterosexual intercourse.

However, the other less visible transmission modes are already health problems in some countries. Exposure to contaminated drug injection equipment is the main transmission route in Afghanistan, the Islamic Republic of Iran, Libya and Tunisia (Slide 15).
The epidemiological data specific to the country where the training is to be organized must be supplied by the facilitators and should be used to produce a set of slides that can be added to the presentation. (Slide 16)

The scale of the epidemic in a country is determined by the national prevalence of the infection in the general population (reflected by the prevalence among pregnant women at national level) and in the key populations (sex workers, men who have sex with men, intravenous drug users, tuberculosis patients, sexually
transmitted disease carriers, prisoners, etc.). The epidemiological data show a high prevalence of HIV infection among sex workers, men who have sex with other men, intravenous drug users. These populations are key groups for the development of the epidemic among the general population. Indeed, these groups are not isolated from the population as a whole: there are bridging populations who are liable to be contaminated from these key groups and then transmit the HIV infection to the broader population. An example would be a truck driver using the services of a sex worker. He may contract the HIV infection from the sex worker and, returning home, transmit the infection to his wife (Slide 17).
The facilitator may conclude with a reminder that:

- The epidemiological situation is still characterized by metrics that are a cause for concern: an increase in the number of PLHIV and new infections.
- The main transmission mode is the sexual route.
- The population at large is not ‘protected’, and there are possibilities for HIV transmission from high prevalence populations via bridging populations (Slide 18).

The epidemiological situation worldwide and in the region can be updated annually from the UNAIDS and WHO web sites (Slide 19).

- [http://www.unaids.org/fr/KnowledgeCentre/HIVData/Epidemiology/epipublications.asp](http://www.unaids.org/fr/KnowledgeCentre/HIVData/Epidemiology/epipublications.asp)

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- **Worldwide:** 35 million PLHIV at the end of 2013.
- **In the Eastern Mediterranean Region:** 280 000 PLHIV at the end of 2013 and 37 000 new infections in 2013 alone.
- **Heterosexual transmission** is the prevailing mode.
- **The bridging populations** are at the origin of HIV transmission from high-prevalence key groups to the general populations.
The human immunodeficiency virus

The agent responsible for AIDS (acquired immunodeficiency syndrome) is a virus called ‘human immunodeficiency virus’ or HIV. Discovered at the start of the 1980s, it presents similarities with the ‘simian immunodeficiency virus,’ or SIV, that contaminates certain monkey species. This explains why most researchers believe that HIV is derived from an SIV that may have accidentally contaminated humans, before undergoing a transformation by mutation resulting in HIV in the form known today (Slide 21).
HIV is a retrovirus. This means that it has an enzyme, reverse transcriptase, which will enable a transformation of the genetic material in the virus.

This material takes the form of ribonucleic acid (RNA), which must be transformed into deoxyribonucleic acid (DNA) before entering the process of viral multiplication. It also has several proteins and glycoproteins, one of the most important being glycoprotein 120 (gp120), enabling it to attach to and fuse with the target cells (Slide 22).

To multiply, HIV must penetrate the genetic material inside a cell to use its protein synthesis mechanisms and turn them to its advantage: the contaminated cell thus becomes a factory for producing viruses.
Virus multiplication is a cyclic process that involves several key elements: receptors and co-receptors, and enzymes. The virus must first attach itself to the cell membrane: the glycoprotein 120 (gp120) in the virus attaches itself to the cell's CD4 receptor. Afterwards, the viral envelope fuses with the cell membrane enabling the viral RNA to penetrate the cell (Slide 23).

An enzyme, reverse transcriptase, then enables the constitution of complementary DNA from the viral RNA (Slide 24).

DNA then migrates into the cell nucleus where an enzyme, integrase, enables it to integrate the genetic material of the cell (Slide 25). This cell is then able to synthesize the viral proteins (Slide 26).
After the long protein chains have been split by a protease, the viral constituents can be assembled and the new virions leave the cell (Slide 27). The main target of HIV is a blood cell, the CD4 T lymphocyte. The contaminated CD4 T lymphocyte will produce billions of virions before being destroyed.
The biological characteristics of HIV enable a distinction to be made between HIV-1, the most widespread worldwide, and HIV-2, only present in certain regions and resulting in a disease that develops far more slowly than HIV-1 (Slide 28). HIV-1 can also be sub-divided into several sub-types (A, B, C), the relative frequency of which varies from one region to another around the globe. Another characteristic of HIV is the great antigenic variability that makes it very difficult to develop a vaccine.

- HIV is derived from SIV strains that infect monkeys.
- HIV is a retrovirus characterized by an enzyme, reverse transcriptase.
- HIV-1 is the world’s predominant type and is subdivided into three groups and several sub-types.
- HIV replication takes place in the target cells, notably CD4 T lymphocyte.
Session 2: Transmission and prevention

One of the facilitators will start with a reminder of the goals of Module 1.
HIV transmission

HIV is transmitted via three routes: the sexual route, through blood and blood derivatives and from HIV-positive mothers to their children (Slide 5).

HIV cannot be transmitted by ordinary everyday actions, using public lavatories or washrooms, or insect bites or stings (Slides 6, 7 and 8).
Module 1

Slide 6: Everyday life activities do not transmit HIV

HIV is not transmitted by:
Everyday acts

- Hugging a PLHIV
- Drinking from the same glass
- Shaking hands with a PLHIV
- Eating from the same dish as a PLHIV
- Working in the same office

Slide 7: Lavatories, towels or soap do not transmit HIV

HIV is not transmitted by:
Washrooms and shared towels and soap
HIV basic knowledge and stigma reduction in health care settings

Slide 8: Mosquitoes do not transmit HIV

Module 1: HIV epidemiology, transmission and prevention

HIV is not transmitted by:
Mosquitoes

Transmission by the sexual route

Sexual transmission of HIV
HIV, present in large quantities in the sperm or vaginal secretions of a HIV-positive person, can be transmitted during heterosexual or homosexual intercourse.

The risk varies according to the type of intercourse: anal carries a higher risk than vaginal; vaginal carries a higher risk than oral-genital; receptive carries a higher risk than insertive. Receptive intercourse is defined as penetration by an HIV-infected partner. Insertive intercourse is defined as penetration of an HIV-infected partner. (Slides 10 and 11)
The risk of sexual transmission is influenced by numerous factors (Slides 12 and 13). Transmission is easier from men to women; this vulnerability in women is partially explained by the anatomical structure of the female genital organs. Sexually transmittable infections (STI) increase the quantity of HIV in the sperm, and antibiotic treatment for an STI reduces it. However, the population impact of care for STI has shown variable impact on HIV seroconversion rates. Genital lesions, traumatic intercourse, first intercourse, intercourse during menstruation all increase the risk. Risk is highest in the event of a high viral load. Circumcision reduces the risk for men.
Transmission by the blood route

Historically many cases of HIV infection have been caused by viral transmission during the transfusion of contaminated blood or blood derivatives. Currently, this transfusion risk is under control in most countries. Blood bags are tested with very sensitive techniques (Slide 15).

HIV can also be transmitted through sharing of equipment (syringes) among intravenous drug users and the use of badly sterilized invasive devices (Slide 16).
The average risk of contamination after an injection with a bloodstained needle is estimated at 0.1% to 0.3% compared with 2% for the hepatitis C (HCV) virus and 6% to 60% for the hepatitis B virus (HBV) (Slide 17).

Hundreds of cases of contamination of health care personnel following an accidental exposure to blood have been recorded around the world (Slide 18).
HIV-contamination of health care professionals in France

Professional HIV seroconversions among health care personnel

<table>
<thead>
<tr>
<th>Cases</th>
<th>USA</th>
<th>Europe</th>
<th>Rest of the world</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documented</td>
<td>57</td>
<td>35</td>
<td>14</td>
<td>106</td>
</tr>
<tr>
<td>Possible</td>
<td>139</td>
<td>85</td>
<td>14</td>
<td>238</td>
</tr>
<tr>
<td>Total</td>
<td>196</td>
<td>120</td>
<td>28</td>
<td>344</td>
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</table>

HIV-positive mother-to-child transmission
In the absence of effective preventive measures, there is a risk that a pregnant, HIV-positive woman will transmit the virus to her child in 30% to 40% of cases. The transmission may occur during the pregnancy (5%–10%), labour and delivery (10%–20%) and after delivery via mother's milk (5%–10%). The risk of transmission is significantly influenced by the mother's plasmatic viral load (Slide 20).

- Three modes of transmission: sexual route, blood route and HIV-positive mother to child.
- Sexual transmission is influenced by several factors.
- Blood transmission is observed among intravenous drug users, after a transfusion of contaminated blood or after accidental exposure in the health care environment.
- The risk of transmission from an HIV-infected mother to her child is estimated at 20%–40%, in the absence of preventive measures.
Prevention of HIV transmission

Brainstorming

Measures aimed at preventing HIV transmission are to be approached interactively. Facilitators will invite participants to join in an open discussion on the theme of the prevention of HIV infection. The facilitators will use brainstorming, a technique for creative group thinking as a problem-solving method using the ideas expressed by the participants, led by a facilitator.

It is important that facilitators make sure the required equipment is available. It is also important to set out chairs in a way that encourages an exchange of opinions and discussion (a horseshoe, oval or circular arrangement).

Preparation for brainstorming

- Paperboard
- Thick markers

Session goal

- Identify and discuss measures that can be implemented to prevent or reduce HIV transmission.

Length: 45 minutes

Content of brainstorming

The prevention of sexual transmission is based firstly on behaviour: fidelity and monogamy within a relationship, the use of condoms (male or female), STI control. It is also important to combat sexual violence and integrate HIV prevention into care programmes for victims of violence. In the event of accidental sexual exposure to HIV, it is possible to prescribing post-exposure prophylaxis using a combination of antiretroviral drugs, provided that this is done at an early stage.

The prevention of transmission by the blood route begins with transfusion safety and the destruction of blood bags liable to test HIV positive. It is also important to control drug use, especially intravenous drug use. This requires special harm reduction programmes to reduce the risk: approaches include the provision of disposable needles for drug users or methadone treatment.

In the hospital environment, campaigns to generate awareness among health care personnel contribute to behaviour change and the implementing of standard precautions to reduce the frequency of blood exposure accidents (BEA). A special place must be designated for standard precautions to be taken by health care personnel. It is important to remind personnel of the importance of hand-washing, the use of barriers (gloves, protective glasses, gowns), safety systems, decontamination of multi-use equipment, containers for collecting sharps and cutting instruments and the management of hospital waste. It is also of prime importance to address the behaviour of some health care personnel who engage in hazardous practices such as "recapping needles". Health care personnel should also be aware of the appropriate behaviour to adopt in the event of a BEA.
The prevention of mother-to-child HIV transmission is based on a prophylactic antiretroviral treatment for HIV-positive pregnant women, a scheduled Caesarean section, whenever possible, if the viral load is not controlled, antiretroviral prophylaxis for newborn babies and exclusive bottle feeding, or protected breastfeeding by an antiretroviral treatment followed by the mother throughout the breastfeeding period.

**Brainstorming procedure (Slides 21 to 24)**

- One of the facilitators explains what is expected of the participants and outlines the problem: “How to prevent HIV transmission?”
- One of the facilitators reminds participants, while questioning them, of the data in the presentation on modes of HIV transmission.
- Subsequently, participants are invited to suggest measures likely to reduce HIV transmission. All the proposals are noted on the paperboard.
- The facilitators will help to organize the proposals in groups and by order of importance (prevention of sexual transmission, prevention of blood transmission (especially by implementing precautions in the care environment), prevention of mother-to-child transmission).
- Conclude by grouping together the means of: 1) reducing sexual transmission; 2) reducing blood transmission; and 3) reducing mother-to-child transmission.

**Prevention of HIV infection in the health care environment**

The aim of this section is to reduce the apprehension frequently observed among health care personnel when they have to enter into contact with HIV-infected patients in a health care facility. This section also provides an opportunity to raise awareness that any patient must be considered as potentially infected by HIV or any other blood transmittable virus.

This subject will be approached through a Q&A session led by the facilitator. This will be followed by a PowerPoint presentation summarizing the best practices for reducing the risk of BEA and the measures that should be taken after an accidental exposure to HIV in the health care environment.

**Question and answer session**

**Session preparation**

- PowerPoint presentation used to project the questions on the screen.
- Computer and projector 'data show'

**Session goals**

- Develop awareness that the BEA risk is constant in the health care environment
- Identify the existence of BEA occurrence in participant past experience
- Identify gaps in the knowledge and implementation of standard precautions for BEA prevention

**Length:** 30 minutes
Session content (Slides 25–35)

Question 1: Have you ever had a blood splash on the hand or the face?
Participants should answer by raising a hand. The facilitator counts the number of hands raised, will note that this is a frequent accident and may conclude by asking who has experienced a blood projection more than once.

Question 2: Has your skin ever been pricked by a needle used on a patient?
As for question 1, the facilitator counts the raised hands and will note that such accidents are not infrequent. The facilitator will ask one or two people about the circumstances in which this occurred and concludes by asking who has had their skin pricked more than once with a bloodstained needle.

Question 3: Have you ever witnessed a blood exposure accident involving one of your colleagues?
Participants should answer by raising a hand. The facilitator counts the number of hands raised. The response can be used to emphasize the frequency of these accidents, even for those who have never themselves experienced one.

Question 4: What were the circumstances of the occurrence for the victims of the blood splash?
The facilitator asks those participants who have experienced blood splash to again raise their hand and asks two or three of them to detail the circumstances of the accident, selecting first a person who is comfortable speaking in public and was already identified during the discussions on the first three questions.

Question 5: For victims of pricking with a bloodstained needle, what were the circumstances of the occurrence?
The facilitator asks the participant to describe exactly what action he or she was executing at the time of the accident. Was there an emergency? Was the patient in a state of agitation? A child or an adult? In which type of hospital service did the accident occur? How deep did the needle go? Was there any bleeding? What type of needle was used? (Use the discussion to explain that hollow needles carry more risk than solid needles.)

Question 6: What did you do after the pricking?
The participants who experienced pricking are asked to explain what they did immediately after the accident. Wash with water? Soap? Use an antiseptic? Which? For how long? Did someone press the lesion to make it bleed? This point should be expanded upon to explain why this practice should be banned.

Question 7: Were you wearing gloves at the time of the blood exposure accident?
The facilitator again addresses the participants who have experienced pricking to ask whether they were wearing gloves at the time of the accident. Some will say that the gloves did not protect them. Use the discussion to explain that the risk is reduced when the needle traverses the glove and expand on the difference between solid and hollow needles.

Question 8: Do you have containers for disposing of needles and scalpels?
Addressing all participants, the facilitator asks whether any containers are available for disposing of used needles and scalpels. Alternative solutions are also available (glass or plastic vials): these should be encouraged and the procurement of containers addressing safety standards advocated.
Question 9: Have you already received training in blood exposure accidents?

This question will enable the facilitator to identify participants who have already received training in blood exposure accidents. The facilitator will take account of this in the explanations provided during the PowerPoint presentation.

**Session procedure**

- One of the facilitators explains the Q&A session.
- The questions are projected and read by a facilitator.
- Participants answer by raising their hand.
- The facilitators comment on the response and answers.
- At the end of the Q&A session, the facilitators review the standard precautions to reduce the risk of blood exposure accidents and introduce the presentation on possible post-exposure prophylaxis in the event of such an accident.

**Post HIV exposure prophylaxis for health care workers**

After exposure to HIV, the infection does not develop immediately. During the interval it is possible to prescribe a prophylactic antiretroviral treatment in an attempt to prevent viral replication (Slide 37).
The prescription of post-exposure prophylaxis (PEP) is based on certain eligibility criteria (Slide 38).

a) The interval between exposure and the medical consultation

PEP must start as soon as possible after exposure, in the first hours. Beyond 72 hours, PEP becomes ineffective and will not be prescribed (Slide 39).
b) The HIV serological status of the exposed person

PEP can only be prescribed if the exposed person is HIV-negative. A rapid HIV test must be carried out for the exposed person.

An exposed person who turns out to be HIV positive will not benefit from PEP and should be directed towards a clinical service for specialized care (Slide 40).
c) The characteristics of exposure

The severity of the exposure should be assessed on a number of parameters. The first step is to identify the nature of the body fluid at the source of the exposure.

![Slide 41: Body fluids and the risk of HIV transmission](image)

Some body fluids (blood, body fluid containing blood, interstitial fluid, semen, vaginal secretions) carry a high risk; others are considered low-risk (faeces, nasal secretions, saliva, sputum, sweat, tears, urine, vomit) (Slide 41).

Is the accident a percutaneous exposure (pricking or wound) or a splash onto mucous membrane or broken skin, which that carries a lower risk (Slide 42)?
d) The HIV serological status of the source patient

If the source patient has been correctly identified and has an unknown HIV status, a rapid HIV test should be carried out with the patient’s consent. If the source patient is negative, PEP should not be prescribed. If there is a risk that it will take a long time to get a result of the test, PEP should be started. It will be stopped after the result of the HIV test is known and if it is negative. (Slide 43)
In summary

A person potentially exposed to HIV is eligible for PEP if:

- The exposure has occurred in the last 72 hours;
- The exposed person is not infected or known to have been infected by HIV;
- Mucous membrane or broken skin has been significantly exposed;
- The source patient is HIV-positive or of unknown status. (Slide 44).

According to WHO recommendations, the combined regimen for PEP is a dual therapy made up of two nucleoside inhibitors of reverse transcriptase. The most commonly used combination is zidovudine (ZDV) and lamivudine (3TC).

The prescription of a tritherapy is less frequently used and is prescribed in specific situations: for example, when there is a significant probability that the HIV will resist an antiretroviral medicine. (Slide 45)

This prophylaxis is prescribed for a period of 28 days.
Health care personnel must be trained to adopt appropriate responses to a potentially contaminating blood or body fluid exposure.

This begins by implementing immediate measures (Slide 46):

- The wound should not be pressed or made to bleed as this has been shown to cause tissue inflammation, which favours HIV migration and consequently the development of the infection.
- The wound should be washed with soap and water.
- The effectiveness of antiseptics or disinfectants has not been proved. However, WHO recommends the use of a solution of chlorhexidine gluconate and the avoidance of chlorine or iodine derivatives, which are more irritating.
- In the event of exposure to mucous membrane, careful, prolonged washing with water is recommended.
Exposed persons should have access to pre-test and post-test counselling to determine their HIV status. This test should be carried out rapidly after the exposure, as it is one of the criteria determining eligibility for PEP. However if this is impossible it should in no event delay the start of the PEP. The test should be repeated 3 months and 6 months after the exposure to ensure that there is no seroconversion.

Screening for hepatitis B and C should be carried out at the same pace to ensure that neither the hepatitis B nor hepatitis C virus was transmitted at the time of exposure.

Facilitators should prepare a slide summarizing the PEP procedure in place at country level (Slide 47).
If the person exposed is a woman, and because the usual antiretroviral treatments could have embryo-foetal repercussions even though they are authorized on expectant mothers, a pregnancy test will be conducted during the first consultation and at the end of the fourth week after the exposure.

To conclude, access to post-exposure prophylaxis should not obviate the need for standard precautions. Ensuring round-the-clock access to this prophylaxis contributes to protecting health care personnel and reduces apprehension about taking in and providing care for a PLHIV (Slide 48).

Slide 48: Conclusions on post-exposure prophylaxis

The following criteria are indications for the use of PEP (WHO, 2010).

- If the source patient is HIV-positive, prophylaxis is recommended except in the case of exposure by splashing. Dual therapy will be the rule unless there is a significant risk of drug-resistant HIV.
- If the source patient's HIV status is unknown, PEP should be considered in view of the prevalence of HIV infection among the population or sub-group to which the source patient belongs. It will not be recommended if the percutaneous exposure is slight (small hollow needle, solid needle or superficial break of skin) or if the exposure by splashing is slight (minimal volume of body fluid or slightly contaminating body fluid).
End-of-module quick evaluation

Module title: ..............................................................................................................................................................................................

Please give us your opinion about the session by giving a score using the following rating scale:

1: Strongly disagree
2: Disagree
3: Neither agree nor disagree
4: Agree
5: Strongly agree

<table>
<thead>
<tr>
<th>Item</th>
<th>Score</th>
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<tbody>
<tr>
<td>1. The objectives of the session were clearly stated</td>
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<td>2. The trainer communicated effectively</td>
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<tr>
<td>3. The information presented was new to me</td>
<td></td>
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<td>4. The trainer was enthusiastic about the subject</td>
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<td>5. The session content was practical and not too theoretical</td>
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<td>6. The session was well-organized</td>
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<td>7. The trainer asked questions and involved me in the session</td>
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<tr>
<td>8. The content was relevant to my work</td>
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Which aspects of the module were *not* clear?

Comments:

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HIV-related stigma and discrimination are major barriers to the delivery of quality services by health care providers. This comprehensive training package consists of essential information and tools for training health care workers in countries of the WHO Eastern Mediterranean Region. It comprises four modules covering the key activities and information necessary to reduce HIV-related stigma and discrimination in the health care setting.