Module 2

Natural history and clinical aspects

HIV basic knowledge and stigma reduction in health care settings
Module goals
Module 2: Natural history and clinical aspects

Participants will be able to:
- offer an insight into the epidemiological situation in the country and worldwide
- present the HIV transmission modes and the broad approaches to prevention
- implement post-exposure prophylaxis for HIV in the health care environment.

Participants will be able to:
- describe the natural history of the HIV infection
- expose the main circumstances in which the HIV infection is discovered
- describe some of the clinical manifestations of the HIV/AIDS infection.

Participants will be able to:
- name the techniques used for the biological diagnosis of the HIV infection
- argue the need to comply with ethical and confidentiality imperatives in the health care environment
- name the interventions to reduce HIV stigma and discrimination in health care settings.

Participants will be able to:
- inform a PLHIV about how care is organized in the country
- inform a PLHIV about the principles of care
- inform parents about the care available for a newborn baby, infant or child infected by HIV
- argue the need for optimal adherence to antiretroviral therapy.
Module 2: Natural history and clinical aspects

Participants will be able to:
- offer an insight into the epidemiological situation in the country and worldwide
- present the HIV transmission modes and the broad approaches to prevention
- implement post-exposure prophylaxis for HIV in the health care environment.

Participants will be able to:
- describe the natural history of the HIV infection
- expose the main circumstances in which the HIV infection is discovered
- describe some of the clinical manifestations of the HIV/AIDS infection.

Participants will be able to:
- name the techniques used for the biological diagnosis of the HIV infection
- argue the need to comply with ethical and confidentiality imperatives in the health care environment
- name the interventions to reduce HIV stigma and discrimination in health care settings.

Participants will be able to:
- inform a PLHIV about how care is organized in the country
- inform a PLHIV about the principles of care
- inform parents about the care available for a newborn baby, infant or child infected by HIV
- argue the need for optimal adherence to antiretroviral therapy.
Natural history of the HIV infection
Module 2: Natural history and clinical aspects

Natural history

Exposure → Infection

- No infection
- Primary infection
  - Asymptomatic HIV-positive
    - 10 years later
      - Non-progressor: 5%–10%
      - Minor infections: 20%
      - AIDS: 70%
Evolution of CD4 and viral load
Module 2: Natural history and clinical aspects

Two essential parameters (CD4 and viral load)
Module 2: Natural history and clinical aspects

Destruction of CD4

Normal HIV infection
Consequences of the reduction of CD4 T lymphocytes

Loss of defence mechanisms

Immune system intact

Immune system destroyed

Fungi
Viruses
Parasites
Bacteria
Fungi
Parasites
Bacteria
Tumours
Clinical and biological correlation

- PI
- Asymptomatic
- Minor infections

AIDS
- Tumours
- Opportunistic infections
- HIV encephalitis

CD4

Years

200

2  4  8  10
Module 2: Natural history and clinical aspects

Rate of CD4 decline and occurrence of Opportunistic Infections

- Candidiasis
- Herpes Zoster
- Kaposi's sarcoma
- Lymphoma
- Pneumocystosis
- Toxoplasmosis
- CMV
- Atypical mycobacterioses

CD4

VL

PI
Asymptomatic
AIDS

200

years

2 4 8 10
Antiretroviral therapy

- Can modify the natural history of HIV infection
- Can inhibit viral multiplication and consequently restore cell immunity
Classifications of HIV infection
Rate of CD4 decline and occurrence of opportunistic infections

- **Candidiasis**
- **Herpes Zoster**
- **Kaposi's sarcoma**
- **Lymphoma**
- **Pneumocystosis**
- **Toxoplasmosis**
- **CMV**

**Species**:
- **PI**
- **Asymptomatic**
- **AIDS**

**Legend**:
- **CD4**
- **VL**

**Timeline** (years):
- 2
- 4
- 8
- 10

**Threshold** (CD4 count): 200
Basis of classification

Cases of HIV infection are classified as follows

• According to clinical manifestations: primary infection, general signs, minor infections, opportunistic infections, HIV-related tumours...

• According to degree of immunodeficiency: CD4 T lymphocyte count

• According to age: adults and adolescents, children
Different classifications

WHO classification

• Stage I: asymptomatic infection or lymphadenopathy
• Stage II: moderate infection
• Stage III: advanced infection
• Stage IV: severe infection

CDC classification
(Centers for Disease Control and Prevention, Atlanta)
Category A, B and C

Definition of AIDS: depends on choice of classification
Classification used in the country
Definition of AIDS used in the country