

# **HIV & AIDS 101**

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# USAID/Philippines Health Program

**Strategic objective:** *“Improved Family Health Sustainably Achieved”*

- **Strengthening Local Governance for Health (HealthGov)**
- **Sustainable Health Improvements through Empowerment and Local Development (SHIELD)**
- **Private Sector Mobilization for Family Health (PRISM)**
- **Health Promotion and Communication Project (HealthPro)**
- **Health Policy Development Program (HPDP)**
- **TB/infectious diseases (TB LINC)**
  - FP, MCH, Avian influenza, HIV/AIDS are integrated

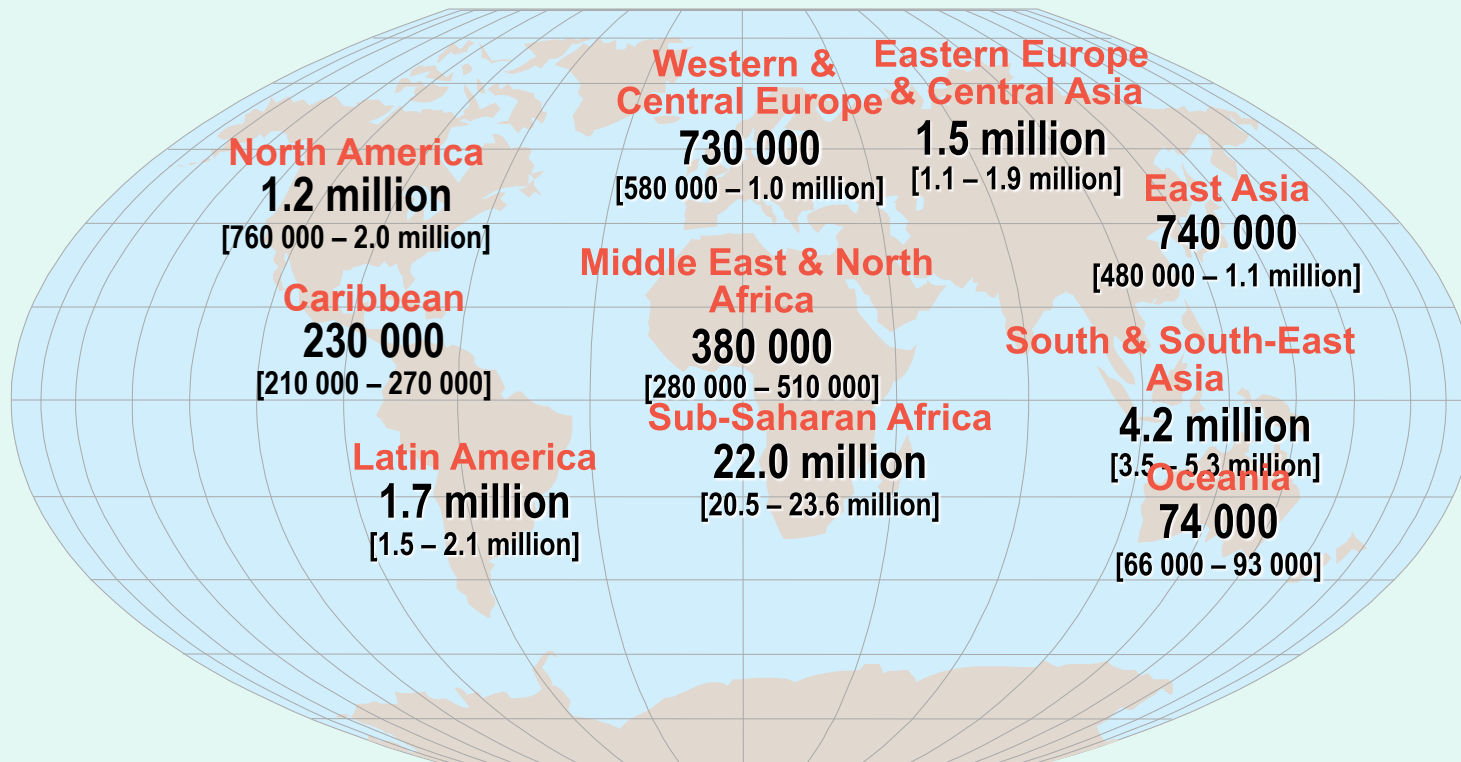
# HIV & AIDS: Global Pandemic



- By the end of 2007, it was estimated that there were **33 million HIV infections** worldwide
- In 2007 alone, there was an estimated total of **2.7 million new HIV infections**,
- By the end of 2005, there were about **2.0 million AIDS-related deaths**.

*Source:* AIDS Epidemic Update, July 2008, UNAIDS

# Adults and children estimated to be living with HIV, 2007



**Total: 33 million (30 – 36 million)**

# What is HIV?

**H**

**Human**

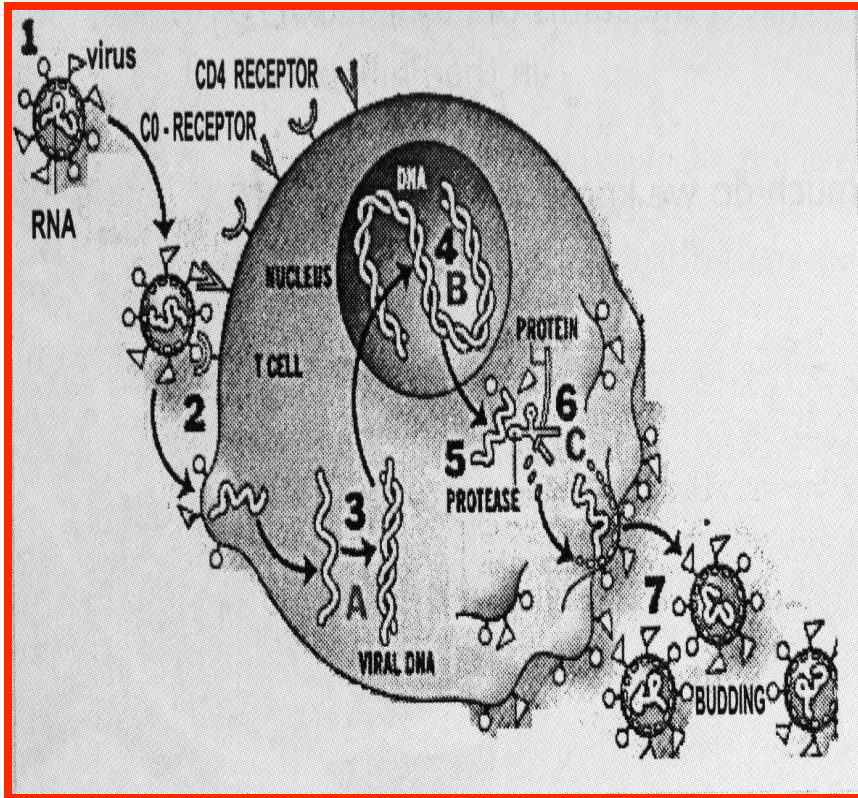
**I**

**Immunodeficiency**

**V**

**Virus**

# What is HIV?



**HIV** is a *virus* that infects the cells of the immune system (mainly *CD4 positive T cells* and *macrophages*) and destroys or impairs their function.

# What is AIDS?



**A**

**Acquired**

**I**

**Immune-**

**D**

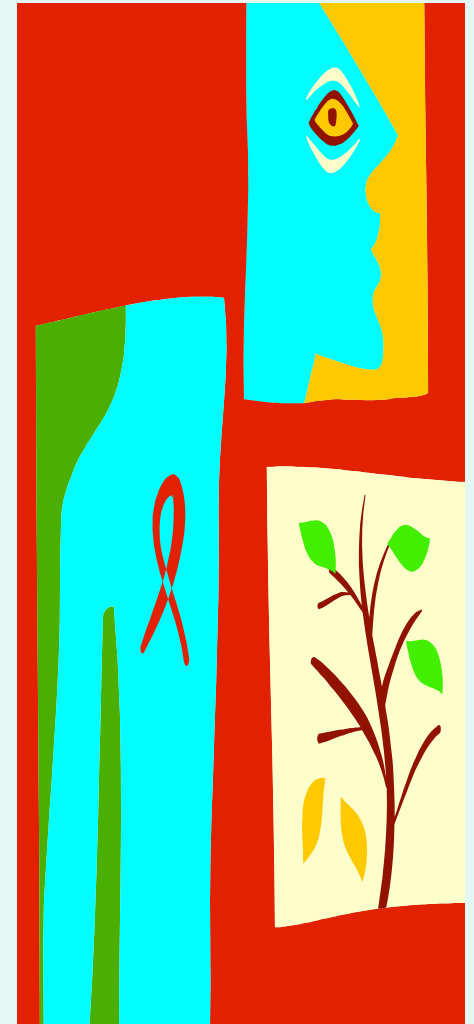
**Deficiency**

**S**

**Syndrome**

# What is AIDS?

- CD4 (T-cell) count *less than 200 cells per microliter* of blood (less than half of what is considered to be the bottom of the normal range);
- Opportunistic infections





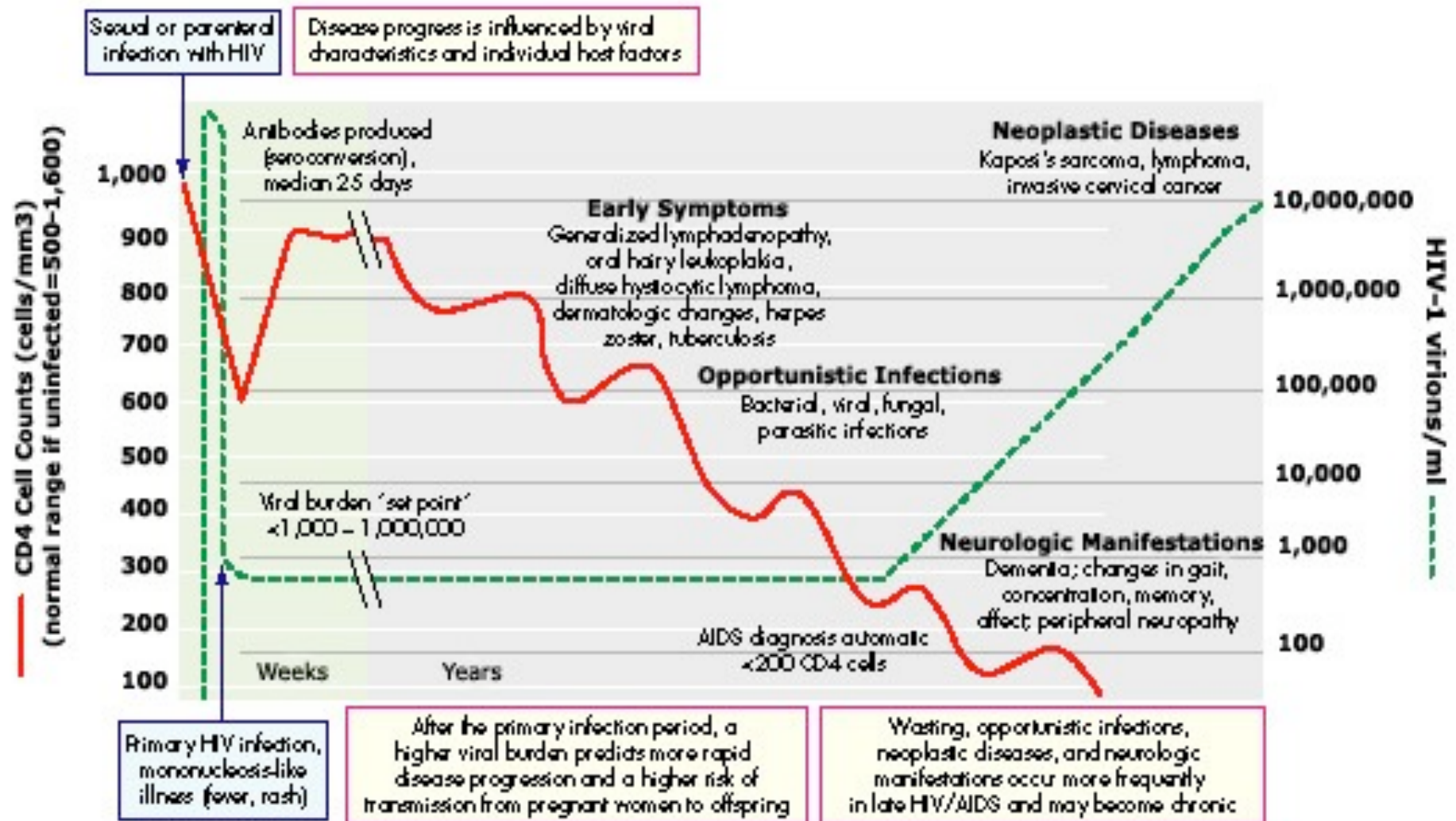
# Common Opportunistic Infections

- **Tuberculosis** (M. Tuberculosis, M. Avium intracellulare) all throughout the body
- **Candidiasis** - fungal infection affecting oral cavity, GIT and vagina
- **Kaposi's Sarcoma** – cancer affecting small blood vessels and internal organs
- **Pneumocystis Carinii Pneumonia** – fungal infection
- **Cytomegalovirus Infection** – causes blindness, affects lungs, brain and gut

# Common Opportunistic Infections

- **Toxoplasmosis** – protozoal infection affecting central nervous system
- **Cryptococcal Meningitis**
- **Cryptosporidiosis** – protozoal infection causing chronic diarrhea
- **Non Hodgkins Lymphoma** – cancer of the lymph nodes; a late manifestation of HIV infection

# HIV Progression





**Let's have a PARTY!**



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# **HIV Transmission**

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# Bebang's Story

Agripino worked as an OFW in Saudi. Because he was often away from his girlfriend, Bebang for long stretches, he became lonely. One evening, he found a woman to ease his loneliness. Soon after, Agripino found a job back home and he and Bebang got married.

Years later, Bebang gave birth to her child, Conching. She didn't thrive and died young. The doctors tell Bebang that the baby died as a result of AIDS and suggest she be tested. The test turns out positive. Bebang is afraid to talk to Agripino about the situation, fearing that he might blame her, react violently, or abandon her; she feels numb. The doctor has urged her to return to the clinic for counseling with her husband.

# Bebang's Story

## Questions:

- Provide a working definition for *transmission*.
- How was HIV transmitted to Bebang? To her daughter?
- Which bodily fluid can transmit HIV?
- What are the possible “doors” (portals of entry) that may allow HIV to enter the bloodstream?

# HIV Transmission

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## Requisites of HIV Infection

- Body fluid with adequate infectious load (*blood, semen, cervical and vaginal secretions, and breast milk*)
- Portal of entry of the virus into the bloodstream



# HIV and STIs

***Sexually transmitted infections (STIs)***- infections passed by sexual contact. Two broad groups:

- ***Curable STIs*** - can be treated (include *syphilis, gonorrhea, chlamydia, trichomonas infection, chancroid,*
- ***Incurable STIs***, such as *HIV, hepatitis B, genital herpes, and human papilloma virus (genital warts) infection,* are caused by viruses. In some settings they can be managed by preventing, relieving, or reducing their symptoms.

# HIV and STIs

- Ulcerative STI - - HIV risk increased 10 - 300 times per exposure
- Non-ulcerative STI - - HIV risk increased 3 - 10 times
  - Although HIV can pass more easily through genital ulcers, STIs that do not cause ulcers also increases the risk because they increase the number of white blood cells (which have receptor sites for HIV) in the genital area and because genital irritation may cause tiny cuts or sores that can allow HIV to enter the body.
  - The “shedding” of HIV in genital fluids is increased by the inflammation related to STIs, making those who are infected with both HIV and other STIs even more infective.

# HIV Transmission

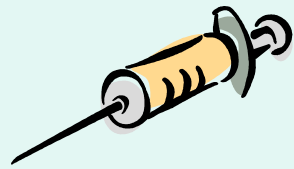
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**What's the fluid?**  
**Where's the door?**

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# Modes of Transmission



- ***Sexual intercourse***
- ***Blood transfusions and sharing of infected syringes and needles*** in health care settings and drug injection
- ***Mother to child*** (during pregnancy, child delivery or breastfeeding)

# HIV Transmission

## Risk of HIV Transmission and the Contribution of Each Mode of Transmission to Global Infections

Exposure	% of global infections
Blood transfusion	5-10%
Mother to child	2-3%
Sexual intercourse without preventive measures <sup>1</sup>	70-80%
Injecting drug use	5-10%
Needle stick & other health care setting exposures	0.01%
Household contact from exposure to blood	-

1 Vaginal or anal sex without the use of a latex condom or similar protective barrier.

2 Risk is cumulative and increases exponentially with each exposure

3 Several co-factors, such as STIs and lack of circumcision, may increase risk

## It is not possible to become infected with HIV through:

- Sharing crockery and cutlery
- Insect/animal bites
- Touching, hugging or shaking hands
- Eating food prepared by someone with HIV
- Toilet seats

# HIV facts and myths

- People with HIV look like everybody else
- “Sex with a virgin can cure HIV”
- “It only happens to gay men/black people/young people, etc”
- “HIV can pass through latex”
- If people smell good they are not infected

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# Prevention of HIV

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# Prevention: Using Decision-Making Skills

- **A** | Abstainence
- **B** | Be faithful
- **C** | use Condom

## **What does Safe Sex mean?**

- Sexual activities which do not involve any blood or fluid from one person getting into another's body – i.e. cuddling, etc

## **What is Safer Sex?**

- little risk; often taken to mean using a condom.
- A condom when used properly prevents infected fluid getting into another

# Is kissing risky?

- Kissing on the cheek, “social kissing” – no risk
- Deep or open-mouth kissing - considered low risk
- One documented instance of HIV infection: both partners had seriously bleeding gums

# Prevention: Communication

## Between partners:

- Do the topics of AIDS and sex normally come up?
- Why is it important for two people to talk about HIV and AIDS?
- Why don't people talk about HIV/AIDS?

# Preventing Sexual Transmission

In the case of HIV-discordant couples (where only one partner is HIV infected)

- discontinue sex or engage in sex that do not involve exchange of body fluids (safe sex)
- consistent and correct [condom use](#)

# Other Methods of Transmission

- Mother- to - child (MTCT)
  - 17 reported cases
- Injecting drug use (IDU)
  - 7 reported cases
- Blood/Blood products
  - 19 reported cases
  - 3 cases needle prick

# Preventing MTCT



- Not getting infected with HIV
- If HIV positive, the mother may choose not to get pregnant
- If pregnant, the mother should take antiretroviral medications
- Replace breast milk with infant formula

# Preventing Transmission: Blood/ Blood Products

- Don't share needles
- Clean needles



# Universal Precautions

- 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 and disposal of waste** contaminated with blood or body fluids;
- **Proper disinfection** of instruments and other contaminated equipments; and
- **Proper handling** of soiled linen.

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# **Understanding the HIV Test**

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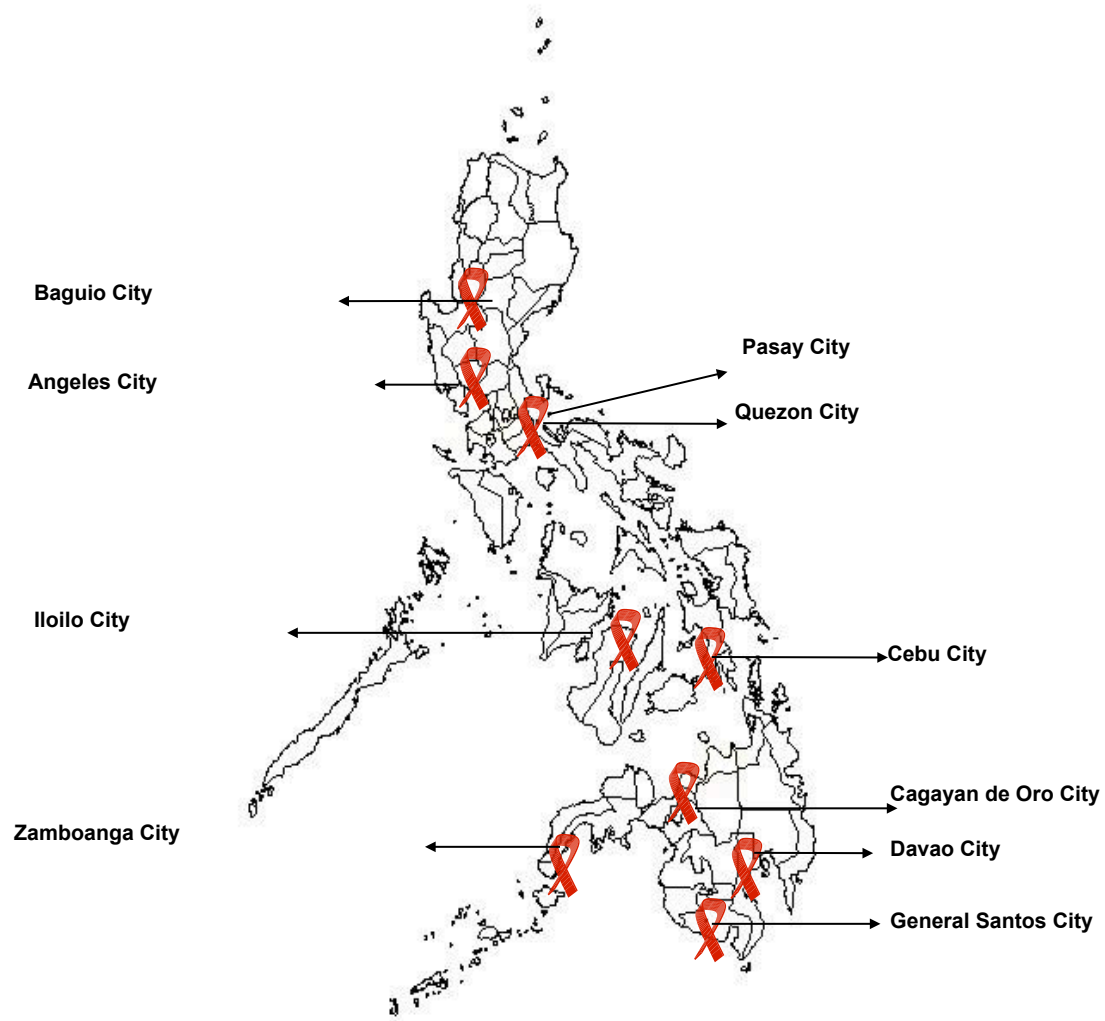
# Voluntary Counseling & Testing

- *Voluntary counseling and testing (VCT)* is a supportive process between a client and counselor.
- A person is counseled prior to being tested to:
  - Determine his/her HIV knowledge and beliefs
  - Assess his/her HIV risk
  - Explain the test and the meaning of test results
  - Get his/her consent or permission to give the test
- After the test, the client and the counselor develop a personal risk reduction plan.

# Does testing and counseling match epidemic need?

- Most testing done for applying work overseas, blood safety settings and in surveillance
  - 6 regional hubs VCT
  - +100 screening places for OFW
  - 10 HIV sentinel sites

# IHBSS - HIV Surveillance



# Key barriers to HIV testing

- Cost of testing ( WB test must confirm + results on EIA; available only in Manila)
- Delay in results & Poor rates of return for results
  - Centralized system 4-6 wks delay
  - Integrity of samples?
  - Shipping & infrastructure costs (costly)

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**“Cure” vs. Treatment**  
**of HIV**

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There is **NO CURE**  
for HIV and AIDS.



# Treatment & Care for PLHIV

## Treatment and care for PLHIV include:

- Voluntary counseling and testing (VCT)
- Support for the prevention of onward transmission of HIV
- Follow-up counseling
- Advice on food and nutrition
- Treatment of STIs
- Management of nutritional effects
- Prevention and treatment of opportunistic infections
- Provision of ***antiretroviral drugs***

# Antiretroviral Drugs

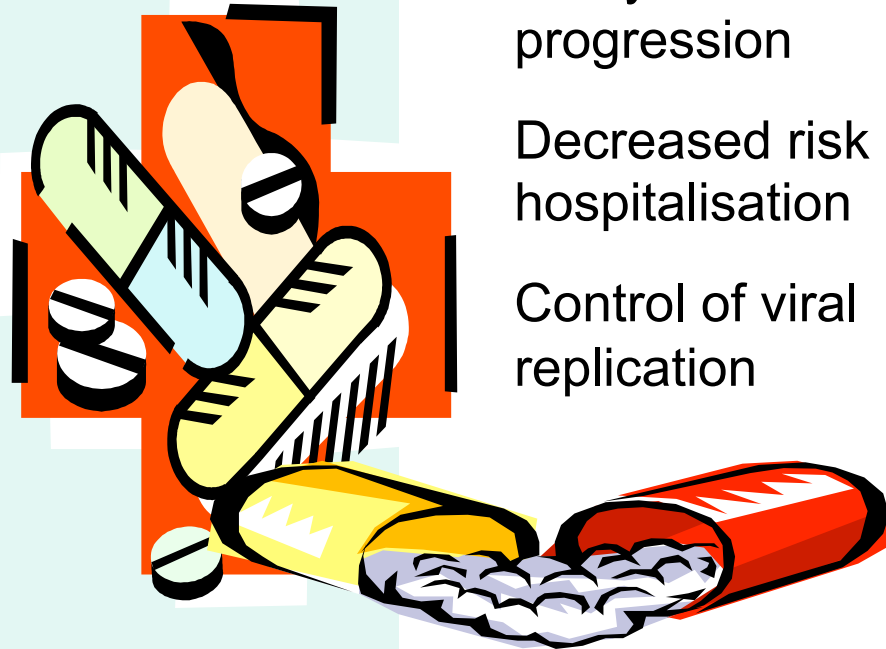
***Antiretroviral (ARV) drugs*** work against HIV infection by slowing down the reproduction of the virus in the body.

# Antiretroviral Drugs



- Multiple drugs have to be combined to prevent emergence of resistance... 3-4 drugs. This is what is known as combination therapy or the 'Highly Active Anti-Retroviral Therapy' (HAART).

# Antiretroviral Drugs



## Advantages

- A longer life
- Delayed disease progression
- Decreased risk of hospitalisation
- Control of viral replication

## Disadvantages

- Serious side-effects
- Impairment of quality of life because of difficult regimen
- Development of drug resistance
- Raising of false hopes in patients not-responding or not tolerating
- Potential toxicity during pregnancies
- Cost, direct and indirect, for the whole family

**Thank You !**