

Testing: HIV, HBV, HCV, TB & barriers to testing

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ROAD MAP

1. HIV testing – *“The hidden epidemic”*
2. Why test for HIV?
3. When should an HIV antibody test be offered?
4. Where should you test?
5. Who should be tested?
6. Any other groups to be tested?
7. When should you consider a test for HIV?
8. Point of Care Testing (POCT)
9. Which test to use?
10. How to offer an HIV test
11. Tests for Hepatitis B & C; Tests for TB
12. Barriers to HIV testing in migrant communities.

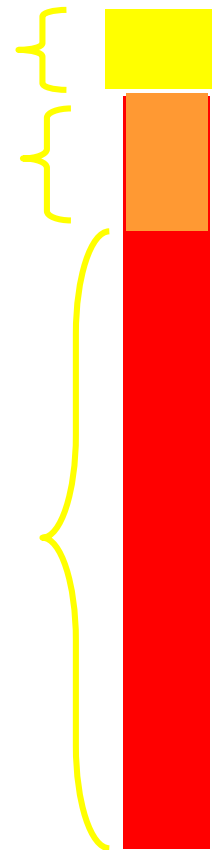
1. HIV/AIDS- *'The hidden epidemic'*



People with AIDS

People with HIV
related illness

People with
asymptomatic
HIV infection



2. Why test for HIV?

AIDUCATION Workshop participants respond...

1. *“IT IS THE RIGHT THING TO DO!”*
2. *“I had sex without using a condom...problem was the beer!”*
3. *“So that I plan for my future”*
4. *“My partner died of AIDS....this rash (HZ)”*
5. *“To prevent others being infected, if I am infected... two times (HZ)”*
6. *“To protect myself from HIV & other STIs”*
7. *“To plan for marriage...having a baby.”*
8. *‘To plan for an insurance policy...bank loan...’*
9. *“To start treatment quickly!”*
10. *“IT IS BETTER TO KNOW, THAN NOT TO KNOW!”*

3. When should an HIV antibody test be offered by the clinician?

1. The client may request an HIV test
 - Multiple reasons – personal, social, economic...
2. Client may have an identified risk
 - Health related, multiple partners, history of STI, drugs...
3. Client may have symptoms / signs of HIV disease
 - TB, Hepatitis, Kaposi's sarcoma, herpes zoster, CMV...
4. Client may be in a group offered screening tests; 'SSS.'

4. Where should you test for HIV?

SOME PLACES INCLUDE;

1. Hospitals / Genito-urinary medicine (GUM Clinics)
2. Antenatal Clinics – especially with PMTCT services
3. Drug-dependency programs (intravenous drug-users)
4. Pharmacy / Chemists
5. Blood bank services and haemophilia services
6. Dialysis, blood donation and organ transplant services
7. Blood-borne virus (BBV) services; Hep B & Hep C...
8. Services for victims of rape – Police / Forensic Medicine
9. Services for patients with TB. Some centres test for both TB & HIV
10. Community voluntary counselling & testing (VCT) / POCT / HTC
11. Home kits available. (REASONS for / against self-testing?)

HIV can be transmitted through blood

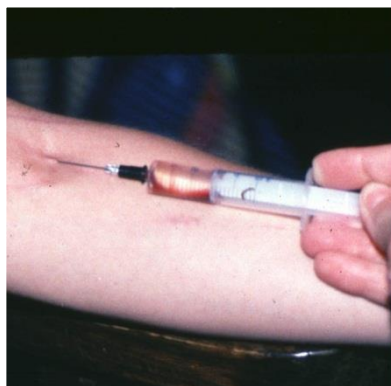


Unscreened
blood transfusion

Unsafe injections



Needle sharing for drug use



5. Who should be tested?

ROUTINE (CLINICAL) TESTING – VULNERABLE GROUPS

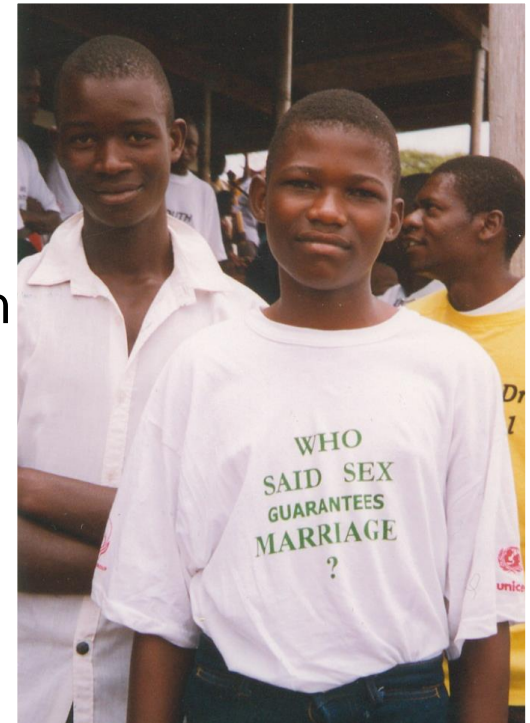
1. Persons who are sexually active / Relationships
2. Persons who present to hospital / clinic with STIs;
 - With genital ulcers / sores / open wounds (HPV 40/100)
3. Tuberculosis—especially TB with '*fluids*' - compartments
4. Hepatitis ...Kaposi's sarcoma ... Herpes zoster...Cervical ca
5. Individuals who have received blood transfusions, blood products or organ transplants.

*Note, client may have above features –BUT HIV NEGATIVE.

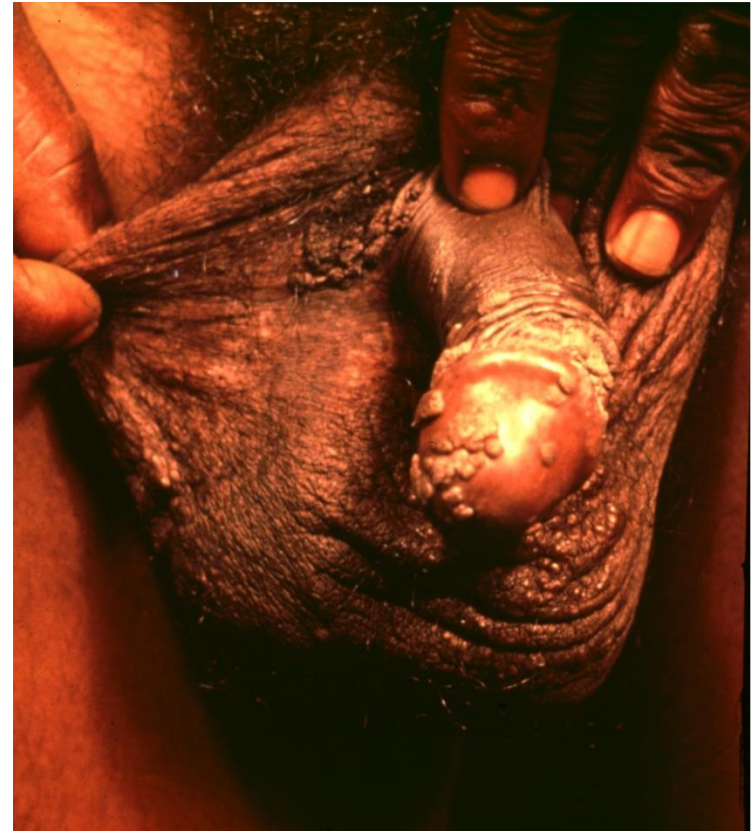
HIV can be transmitted through sexual intercourse



Women and young people are particularly vulnerable to HIV infection



Genital warts





Farai, age 25, had this rash for one month. It was not itchy or painful. She complained of genital sores, and said that she had had '*chicken-pox*' five weeks ago.



Herpes zoster “Shingles”





6. Any other groups to be tested?

ROUTINE (**SOCIAL**) TESTING - VULNERABLE GROUPS

1. Men who have sex with men (MSM)
2. Female sexual contacts to MSM
3. Individuals with history of injecting drugs (IVDU)
4. Individuals with current or former partner with HIV
5. Individuals with history of partner died after a “...*I shared the works... my partner died after a long illness...baby born sick & died before age of 5 years ...mother died after childbirth, she never recovered after giving birth.*”

Mobile populations are vulnerable to HIV infection



7.1 When should you consider a test?

Centres for Disease Control (CDC) recommends:

That everyone between the ages of **13 and 64** should have an HIV Test done at least once as a part of a medical exam. For other individuals more times, depending:

1. Gay men and bisexuals should have tests more often
2. Pregnant mothers in PMTCT Programme
3. Men or women who have been raped
4. Needle-stick / razor blade injuries in health facilities
5. Certain “*AIDS defining conditions.*”

7.2 When should you consider a test?

WHO & UNAIDS have recommended:

HIV testing in;

1. Identification of asymptomatic HIV infected people
2. Diagnosis of HIV-related disease
3. Epidemiological Surveillance
4. Screening blood for blood transfusions.

FOOD FO THOUGHT!

Should HIV testing be compulsory?

HIV can be transmitted from mother to child



...during pregnancy, at delivery, and through breastfeeding

HIV and infant feeding – weighing the risks



Risk of HIV if
breastfed

Risk of diarrhoea and
malnutrition if not
breastfed



**Fathers can help
to make the decision**

Mothers need help to assess the
risks in their own circumstances

Bcn checkpoint / VCT

SPAIN **BCN** & ENGLAND **VCT** Community initiatives:

- ✓ Run by community based organisations, away from hospital
- ✓ *BCN born **2006** (Spain); & [VCT born **2007** (England)]
- ✓ HIV & syphilis rapid testing; [& chlamydia, diabetes, BP]
- ✓ Pre and post-test counselling with emotional support
- ✓ Referral Pathway to hospital or STI clinic for medical doctors, nurses or specialists to attend to client

*BCN checkpoint with **complete** STI screening (hepatitis, HPV and anal cytology) for MSM.

8. HOSPITAL / POCT Testing

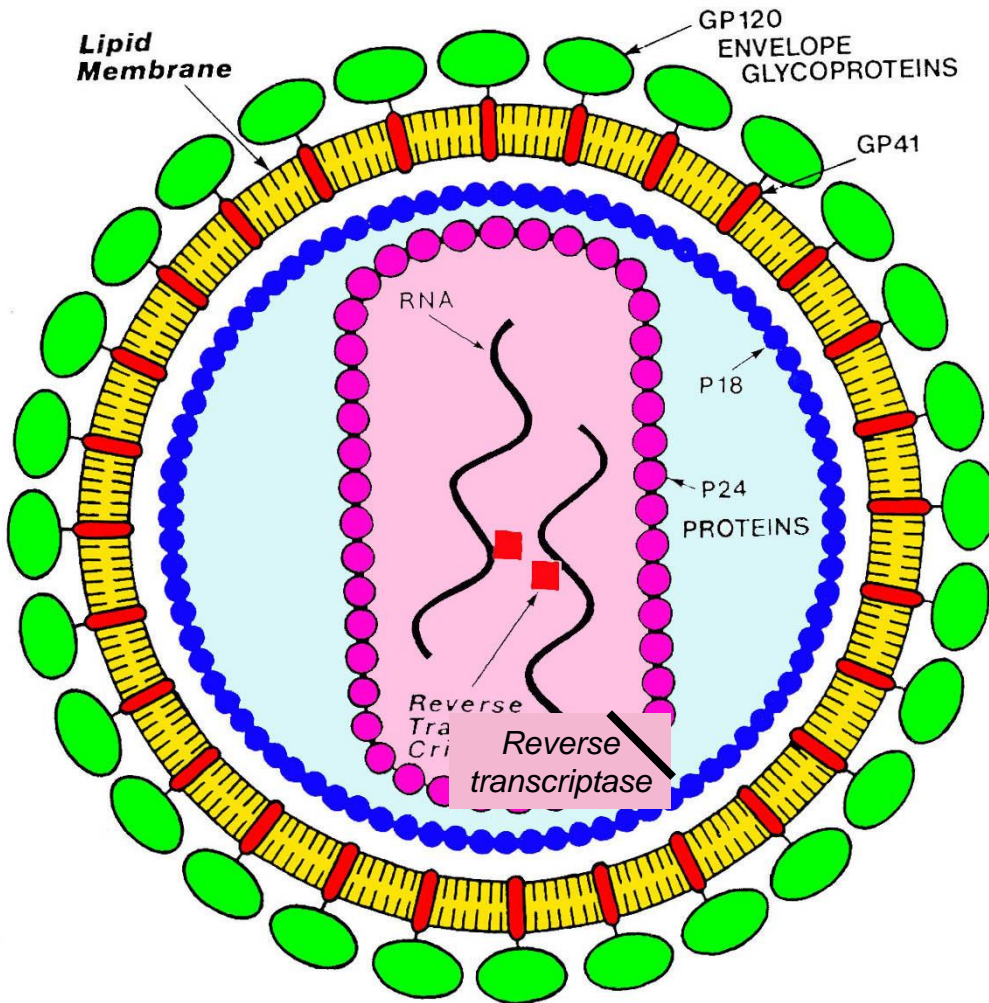
MOST HOSPITALS HAVE SIMILAR PROGRAMS:

1. WHO & UNAIDS Standard Guidelines.
2. Country specific. British HIV Association (BHIVA):
 - STI/GUM clinics; Obstetric settings for high – risk patients; - PCT run community clinics; and Outreach settings
3. Clients who test positive **MUST** be booked into a specialist HIV clinic as soon as possible.

9.0 Which test to use?

RAPID TESTS

- Commonly used. Results within 1 minute – 20 minutes
- Rapid tests look for HIV 1 & HIV 2 antibodies
- Used in **BCN** Checkpoint; HIV testing Centres (**HTC**); Voluntary Counselling & Testing (**VCT**) centres; **POCT** centres and FasTest Centres
 - Not necessary for hospital set up or specialised nurses or doctors
- Sample used is **blood** (finger-prick) or **saliva** tests
- Client to **READ OUT RESULT**...to **OWN** result ... negative or positive
- Non-reactive (**Negative**). Repeat. **Window period?**
- **REACTIVE (Positive)** result. Referred to specialist clinic. Confirmatory.



Structure of HIV

- Type 1
- Type 2

HIV antibody testing – rapid / simple tests



9.1 Which test to use?

ELISA TESTS

Enzyme Linked ImmunoSorbent Assay (ELISA)

First generation of ELISA tests for HIV antibodies were introduced in 1985 – available in 1985

First, second and third generation ELISAs test for ANTIBODIES

9.2 Which test to use?

ELISA TESTS (2)

- Sometimes ELISA called INDIRECT TEST because they test for antibodies and NOT the virus (HIV)
- First, second & third generation ELISAs DO NOT test for the virus
 - DO NOT test for HIV

Antibody only ELISAs are no longer recommended.

HIV antibody testing – ELISA



9.3 Which test to use?

FOURTH generation tests recommended

Introduced and available in late 1990s

It is a **THIRD** generation ELISA + an ELISA for **p24** antigen

Fourth generation tests test for **p24** as well as **antibodies**

Very good at detecting early infection than rapids

REACTIVE (Positive) test result is for confirmation test with one or two supplementary tests.

10.0 How to offer an HIV test

BELIEVE THAT HIV IS LIKE ANY OTHER DISEASE

- BACKGROUND history, lifestyles, social habits and geographical area of origin may be key to diagnosis.
- Healthcare workers (Clinicians, nurses, paramedics, others in HIV services) & counsellors may find it difficult to raise issue or **offer HIV test**
- SOME TIPS or POSSIBLE WAYS to start HIV test issue:
 - ‘With these clinical symptoms (...) we recommend blood tests, **including HIV** infection test’ – OPD/ A & E/ Ward*
 - ‘With pregnancies we **recommend HIV testing** for the health of the mother & the future health of the baby’ –MCH / ANC/ FP.*

OTHER TESTS

11.0 Other Tests - Hepatitis B

Transmission is almost like for HIV infection

- Through infected blood transfusion; sexual contact; exposure through saliva, menstrual, vaginal and seminal fluids; through mother to child at birth; through reuse of needles & syringes; through medical, surgical, dental & tattooing procedures

11.1 Other Tests - Hepatitis B

Lab blood test for Hepatitis B surface Ag or HBsAg

- **Acute Hep B:** Has HBsAg + IgM to core Ag (HBcAg) +HBeAg
- **Chronic Hep B:** Persistent HBsAg +/- HBeAg
- Persistent HBsAg is marker for chronic liver disease or cancer / hepatocellular cancer.

11.2 Other Tests - Hepatitis C

Common **transmission**–injecting drugs (IVDU).

Through infected blood transfusion; sexual contact; exposure through saliva, menstrual, vaginal and seminal fluids; through mother to child at birth;

Through re-use of needles & syringes; through medical, surgical, dental & tattooing procedures.

11.3 Other Tests - Hepatitis C

Lab blood tests for Hep C (HCV) antibodies

- First test is HCV antibody test
- Exposure in last 6 months, test for HCV RNA or
- HCV viral load test (RNA) will confirm or rule out chronic infection.

11.4 Other Tests - Tuberculosis

CDC recommends following groups to be **screened**:

- Close contacts to TB or suspected TB clients
- People living with HIV infection
- Intravenous drug-users.

11.5 Other Tests - Tuberculosis

Testing for TB

- Blood tests
- Chest X-ray
- Sputum for AAFB
- Culture test (Drug resistance TB)
- Skin test – Mantoux test
- Biopsy (Extra-pulmonary TB).
- IGRA (Latent TB).

12.0 Barriers to HIV prevention

1. Economic barriers

- Lack of funding for prevention and testing programmes
- Reliant on international donors such as Global Fund (G-Fund) to Fight AIDS, Malaria & TB
- In 2014 & 2015, **Ukraine** received \$51m from G-Fund
- In 2017, Ukraine to see G-Fund halved
- G-Fund withdrawn from **Romania** in 2010, resulting in government unable to continue supporting needle & syringe exchange programme. HIV PREVALENCE among PWID increased from 3% (2010) to 29% 2013)
- Lack of health insurance. Around 30-50% of PWID in **Estonia** are uninsured.

12.1 Barriers to HIV testing

2. Social barriers

- *Lack of knowledge, wisdom & understanding*
- **Stigma** – cause of infection being ‘promiscuity’
- **Money matters** – income is a priority, not HIV test
- Housing or **accommodation**, next priority
- Issues of **confidentiality**. Other people finding out!
- **Immigration** issues – “*Papers Home Office...*”
- **Criminal prosecution** of HIV transmission: Guilty of ‘*recklessly inflicting grievous bodily harm (GBH)*,’ under Section 20 of the **Offences Against the Person Act 1861**.

12.2 Barriers to HIV testing

3. Social barriers (2) [ANY EXPERIENCE, EU?]

One study from **St Petersburg, Russia**, found that people living with HIV/AIDS stigmatised & discriminated against:

- **25%** REFUSED healthcare
- **11%** REFUSED employment
- **7%** FIRED from the workplace
- **6%** FORCED from their family / homes because of HIV
- Less than **1%** of women who inject drugs have accessed Opioid substitution therapy (OST).
- Women experience **gender-based violence** domestically and from the police.

12.3 Barriers to HIV testing

4. Legal barriers

- Key population face a number of legal (LAW) reasons:
- Laws against / for same sex marriages
- Legislation to protect “traditional” family values that facilitates a culture of homophobia
- Criminalisation of drug use restrict access to services
- In many countries in this region, people must be over 18 years (Age) to access Harm Reduction programmes.

12.4 Barriers to HIV Testing

5. Physical and geographical barriers

- Geographical boundaries. Across border activities
- Urban areas versus rural areas to access services
- Organisational barriers include:
 - Opening hours
 - calibre of staff providing HIV services
 - issues of confidentiality / privacy
 - distant locations and transport costs.

12.5 Barriers to HIV testing

6. Healthcare workers attitudes

- Fear of embarrassing client
- Perceived unconscious discrimination
- Lack or limited clinical knowledge on HIV/AIDS
- Lack of time for pre- or post-test counselling
- Fear of breaking “bad news” to client
- Fear of client reacting badly / aggressively to a REACTIVE (Positive) result.

African saying

*“One spider’s web cannot tie up a lion.
Many spiders’ webs can tie up even
the strongest lion.”*

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