



*Training Course in Sexual and Reproductive Health Research 2014*  
Module: Principles and Practice of Sexually Transmitted Infections  
Prevention and Care

# The STI Epidemics

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# Since the 80's HIV/AIDS



© Bill Stephenson

# ... and, since BC, the STI epidemic



# Sexually Transmitted Infections

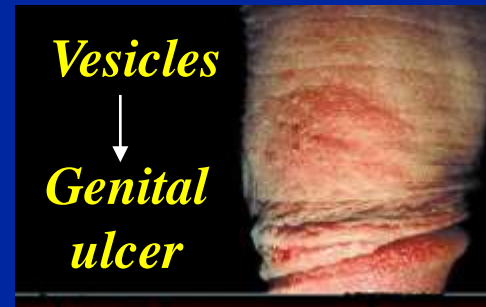
- Spread from one infected person to another through sexual intercourse.
- Some infections may also be transmitted from mother to child during pregnancy and childbirth.
- Another way that infections are passed on is through the sharing of blood products or tissue transfers.
- Some diseases caused by STIs include syphilis, AIDS and cervical cancer.

# Sexually Transmitted and Endogenous Infections

*Urethral discharge*



*Genital ulcer*



*Swollen glands*



*Vaginal discharge*



*HPV infection/Genital warts*



# Sexually Transmitted Infections

- Caused by more than 20 micro organisms (some bacterial other viral)
- Most present in form of 5 syndromes
  - *Urethral discharge*
  - *Genital ulcer*
  - *Vaginal discharge*
  - *Swollen glands*
  - *Lower abdominal pain*

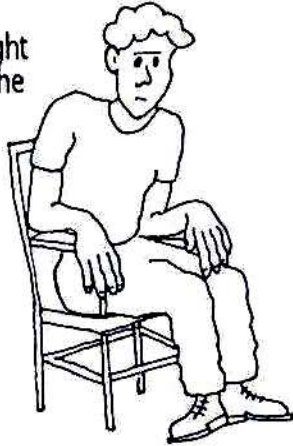


# Reproductive Tract Infections (RTI)

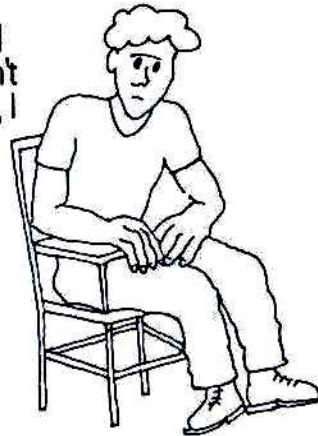
- **Iatrogenic infections**
  - e.g. post abortum
- **Endogenous Infections**
  - e.g. *Candida albicans* and *bacterial vaginosis*
- **Sexually Transmitted Infections (STI)**
  - e.g. gonorrhoea, syphilis, herpes

# Changing terminology...

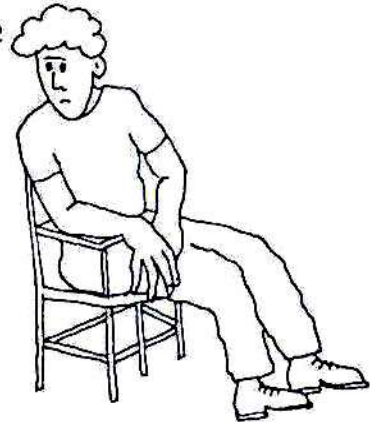
I thought I had the clap



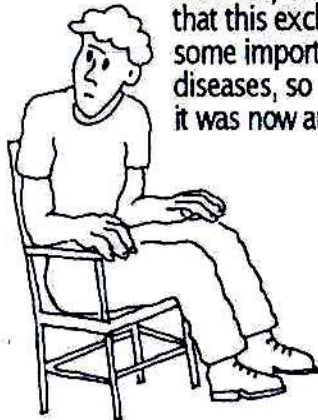
then they told me that I didn't have the clap, I had a VD



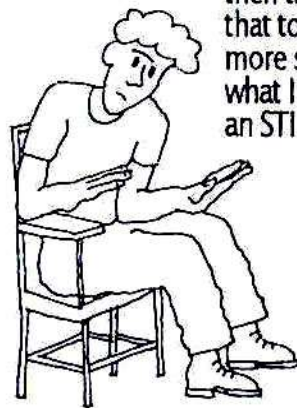
then they told me some people were embarrassed to have a VD, so it was now an STD



then they told me that this excluded some important diseases, so it was now an RTI



then they told me that to be more scientific, what I had was an STI



I still can't piss



but I have a GREAT vocabulary





# HPV



- One of the most deadly STI.
- Virtually all cervical cancer cases are linked to genital infection with the virus.
- Cancer of the cervix is the second most common cancer in women, with about 500 000 new cases and 250 000 deaths each year.
- The new vaccine that prevents the infection could reduce these cervical cancer-related deaths.

# Sexually Transmitted Infections



- Frequently without symptoms
  - Considerable morbidity
- High incidence and prevalence
  - High rate of complications
- Bigger problem in women and young people
  - Facilitate HIV transmission

# STI: complications and sequelae



- **PID - Ectopic pregnancy - Infertility**
- **Perinatal, infant infections (congenital syphilis)**
- **Genito-anal cancers**
- **Facilitate HIV transmission**

# Preventable



- **When used properly and consistently, condoms are one of the most effective methods of protection against STIs, including HIV infection.**
- **Although the female condom is effective and safe, it is not as widely used in national programmes because of its higher cost when compared to male condoms.**

# Determinants



- **Social or economic conditions, and some sexual behaviours increase a person's vulnerability to STIs.**
- **Populations most-at-risk for STIs vary from setting to setting, depending on local culture and practices.**
- **Interventions to prevent and care for STIs should be intensified for such populations.**
  - **Services must minimize stigmatization and discrimination.**

# Determinants of STI epidemic

## *Macroenvironment*

- **Socioeconomic factors**

- poverty
- gender inequality

- **Cultural**

- health seeking behaviours
- silent on sex issues

- **Epidemiological**

- STIs prevalence

- **Demographic**

- population age structure
- sex ratio
- Political commitment

# Determinants of STI epidemic

## *Microenvironment*

- **Biological**

- gender
- age
- other STIs

- **Hormonal**

- use of hormonal contraceptive
- pregnancy

- **Immunological**

- **Behavioural**

- age at coital debut
- multiple sexual partners
- anal sex
- sex during menstruation
- dry sex
- vaginal douching
- male circumcision
- drug or alcohol use

# How STIs disseminate?

Basic Reproductive  
rate

$$R_0 = B \times c \times D$$

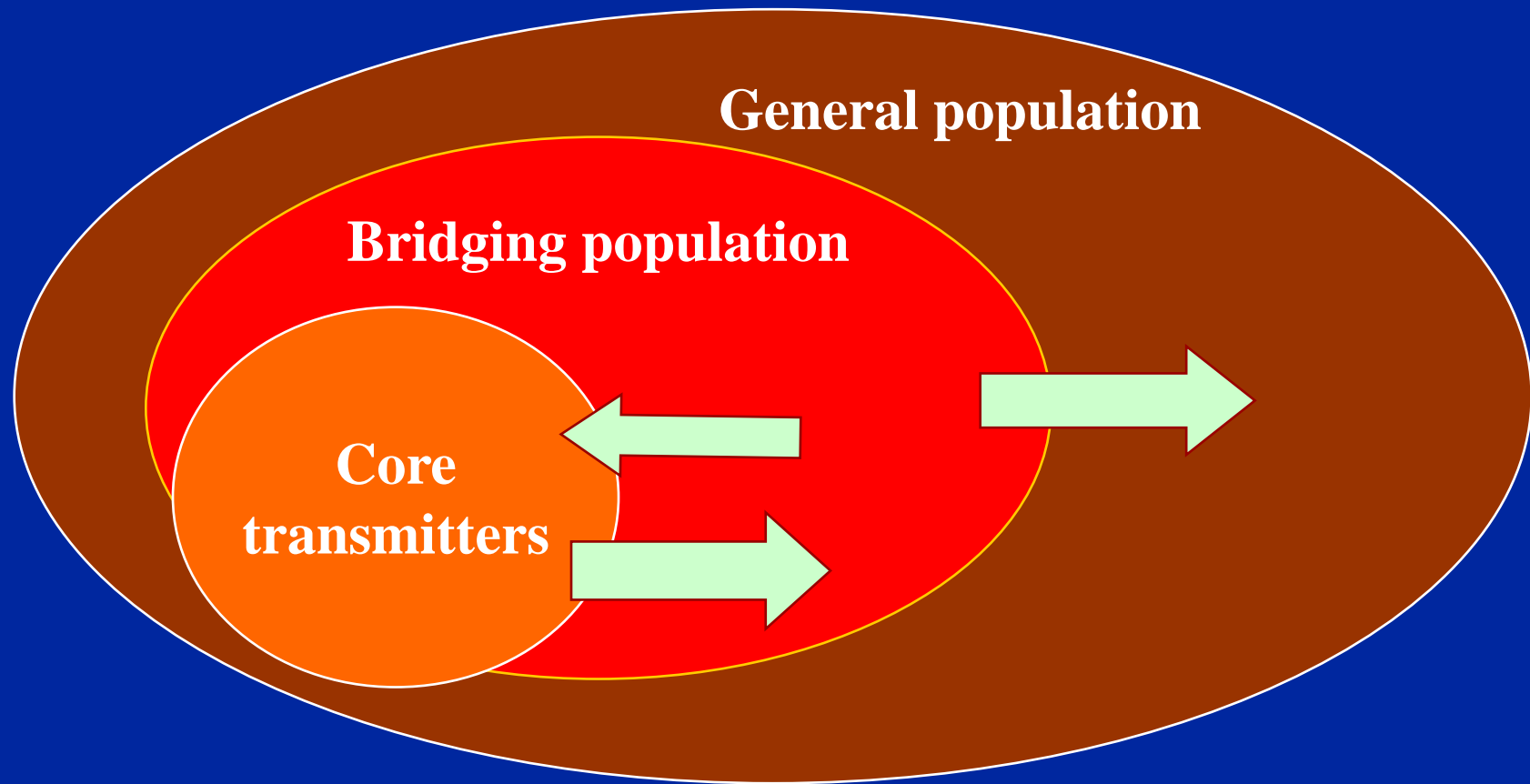
Transmission  
efficiency

Rate of  
sex partner  
change

Duration  
of  
infectiousness



# *STI transmission dynamics at population level*



## **HIV and STI at clinical settings**

- Identification and early intervention with people living with HIV, particularly those recently infected.
- HIV testing and counselling of STI patients, detection of acute HIV infection.
- Regular STI screening and treatment to reduce genital viral load.
- Clinical interventions as an extension of prevention work, reinforcing prevention messages and promoting condoms.

## **Key conclusions STI and HIV, services must include**

- Counselling,
- Offer to test for HIV
- Advice on safer sex,
- Condom promotion
- Delayed sexual debut for young people
- Fewer sexual partners,
- Information on the role of male circumcision in the prevention of HIV infection
- Access to antiretroviral treatment

# Components of STI surveillance

- **Case reporting**
- **Prevalence assessment and monitoring**
- **Assessment of syndrome etiology**
- **Monitoring of antimicrobial resistance**
- **Special surveillance-related studies**
- **Estimates**

# The use of STI surveillance data



# Added Value of STI Surveillance

Improve Patient Care

Effective Treatment Services

Antimicrobial Resistance Studies

Aetiologies of STI Syndromes

Improve Programme Management

Magnitude of STI Problem in Target Population

Case Reporting

Prevalence Assessments

Syndromic

Aetiologic

Universal/Sentinel

Integrated/Vertical

Timeliness

Complete

Consistent

Action-oriented



**STIs "are alive and well"**



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*Thank you*



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