

# STIs and Family Planning

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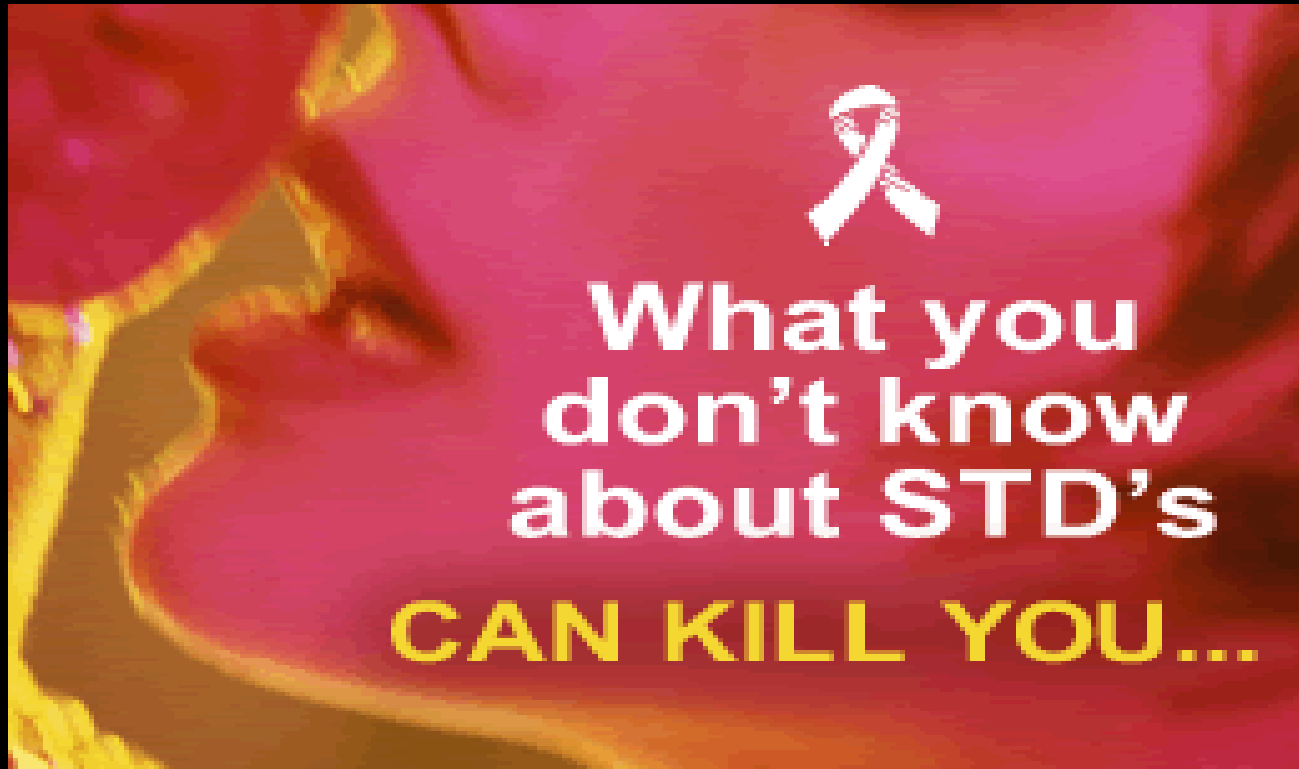
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# PREVENTION AND CONTROL OF STD's



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# OUTLINE:

1. Definition.
2. Epidemiology.
3. Risk factors for STD acquisition and transmission.
4. Brief review of common STD's.
5. Treatment.
6. Prevention & Control f STD's.

# Defining STD

Sexually Transmitted Diseases (STDs) is used to refer to a variety of clinical syndromes caused by pathogens that can be acquired and transmitted through sexual activity.

# Epidemiology: Worldwide

- Chlamydia estimated 92 million cases.
- Gonorrhoea estimated at 62.35 million cases.
- Syphilis estimated at 12.22 million cases.
- HIV in Kenya 8.4% urban; 6.7% rural.

# Risk Factors:

- Unmarried status.
- Residence in an urban area.
- New sex partner(s).
- Multiple sex partners(concurrent).
- History of a prior STD.
- Illicit drug use.
- Contact with sex workers.

# Classification:

- HIV.
- Chlamydia.
- Gonorrhoea.
- HPV.
- Syphilis.
- LGV.
- Herpes Simplex 1&2.

# Bacterial vaginosis

- Normal balance of bacteria in vagina is disrupted and replaced by overgrowth of certain bacteria.
- Cause not fully understood.
- Women at risk are those having new sexual partners or multiple sexual partners or douching.
- Abnormal vaginal discharge with unpleasant odor.
- Increased susceptibility for other stds and for pg women.
- Babies will be born premature or LBW.



# Chlamydia:

- Caused by Chlamydia Trachomatis and can damage a woman's reproductive organs.
- Transmitted via vaginal, oral or anal sex or during vaginal delivery.
- Referred to as a silent disease as majority of infected people have no symptoms
- Women: LAP, nausea, pain during intercourse, fever and bleeding in btwn menstrual periods.
- Men : discharge from penis or pain during urination.
- Complications : PID in 10-15% of untreated women. Chronic pelvic pain, Infertility and potentially fatal ectopic pg.

# Gonorrhoea:

- Caused by Neisseria Gonorrhoea.
- It's spread thru contact with penis ,vagina, mouth, anus and via vaginal delivery.
- Men : burning sensation when urinating, or white, yellow or greenish discharge from penis.
- Women :painful or burning sensation when urinating, increased vaginal discharge or vaginal bleeding btw periods.
- Complications :PID, chronic pelvic pain risk of ectopic pg, blindness,joint infection or sepsis in a newborn.

# Trichomoniasis

- Caused by Protozoa called Trichomonas Vaginalis.
- Transmitted thru penis to vagina intercourse and vulval-vulval contact with infected partner.
- Men: irritation inside the penis, mild discharge or slight burning after urination or ejaculation.
- Women: frothy, yellow green vaginal discharge with strong odor.

# Genital HPV infection

- More than 40 types of HPV can infect genital areas of men and women.
- Transmitted via sexual intercourse.
- Present with genital warts, recurrent respiratory papillomatosis and cervical cancer

# Genital Herpes infection

- Caused by Herpes Simplex virus type 1&2 but type 2 more common.
- Transmission is via contact with sores, ie fever blisters, oral genital contact and genital-genital contact.
- present with sores that heal within two wks, tend to have several outbreaks within a yr.
- Complications risk of transmission to baby, enhanced HIV transmission.

# Syphillis



# Current treatment for various STIs

## Chancroid

Azithromycin 1gm single dose or

Ceftriaxone 250mg IM single dose or

Ciprofloxacin 500mg bd for 3 days, or

Erythromycin 500mg TID for 7 days.

## Genital Herpes

Acyclovir 400mg tid for 7-10 days or 200mg 5 times a day for 7-10 days or

Famciclovir 250mg 3 times a day for 7-10 days or

Valacyclovir 1gm bd for 7-10 days.

# Cont.....

## **LGV**

Doxycycline 100 mg bd for 21days.

Erythromycin 500mg qid for 21 days.

## **Primary and Secondary Syphillis**

Benzathine Penicillin G 2.4 MU. IM single dose for adults.

For infants and Children:

Benzathine Penicillin G 50,000 units/kg IM unto adult dose of 2.4 MU single dose.

## **Early latent Syphillis**

benzathine Penicillin G 2.4MU single dose IM.

## **Late latent Syphillis**

Benzathine Penicillin G 7.2 MU as 3 doses. At wkly intervals.



# Prevention and Control of STDS

## Five Major Strategies:

Education and counseling of persons at risk on ways to avoid STDS through changes in sexual behaviors and use of recommended prevention practices.

Id of asymptotically infected persons and of symptomatic persons unlikely to seek diagnostic and treatment services.

Effective diagnosis, treatment and counseling of infected persons.

Evaluation, treatment and counseling of sex partners of persons who are infected with an STD.

Pre-exposure vaccination of persons at risk for vaccine preventable diseases.

# FIVE P'S

## Partners

Do you have sex with men or women or both?

In the past 2mths how many partners have you had sex with?

In the past 12mths how many partners have you had sex with?

Is it possible that any of your sex partners in past 12mths had sex with someone else while they were still in a r/ship with you?

## Prevention of Pregnancy

What are you doing to prevent pg?

## Protection from STDs

What do you do to protect yourself from STDs and HIV?

# Cont..

## Practices

To understand your risks for STDs, I need to understand the kind of sex you have had recently.

Have you had vaginal sex, meaning penis in vagina sex, If yes, Do you use condoms never, sometimes or always?

Have you had Oral sex, meaning mouth on penis/vagina?

For condom answers:

If never, Why don't you use condoms?

If sometimes, In what situations(or with whom)do you not use condoms?

## Past history of STDs

Have you ever had an STD?

Have any of your partners had an STD?

# Cont..

Additional questions to I'd HIV and Hepatitis risk include:

Have you or any of your partners ever injected drugs?

Have you or any of your partners exchanged money or drugs for sex?

Is there anything else abt your sexual partners that I need to know about?

USPSTF recommends high intensity behavioral counseling for all sexually active adolescents and adults at increased risk of STDs and HIV.



“You’ve got it. Don’t flaunt it. You’ll spread it.”

# PREVENTION METHODS

## Abstinence and Reduction of Number of Sex Partners:

1. Abstain from oral, vaginal and anal sex or to be in a long term, mutually monogamous r/ship with an uninfected partner.
2. Further discussion avail in Contraceptive Technology ,19th edition

# Cont...

## Pre- exposure Vaccination:

1. They include eg. HPV vaccines for females aged 9-26 yrs to prevent cervical pre cancer and cancer, quadrivalent HPV vaccine (Gardasil) and bivalent HPV vaccine (Cervarix). Gardasil also prevents genital warts.
2. Routine vaccination of females aged 11 or 12 yrs is recommended with either as is for females aged 13-26 yrs Gardasil can also be given to males aged 9-26 yrs to prevent genital warts.
3. Hep B vaccine for all unvaccinated, uninfected persons being evaluated for an STD.
4. Hep A and Hep B for men who have sex with men and Injection drug users and to HIV infected persons not yet infected by either one of these viruses.

# Cont..



## Male Condoms:

1. In serodiscordant heterosexual r/ships, in which condoms are consistently used HIV negative partners were 80% less likely to become HIV Infected compared with persons in similar r/ships in which condoms weren't used.
2. Also reduce risk for genital herpes, syphilis and chancroid when infected area or site of potential exposure is covered.



# Cont..



Youth Need  
The Truth:  
**CONDOMS**  
Save Lives

## Male Condom Cont...

3. Cohort studies demonstrate condoms protective against acquisition of genital HPV infection. Prospective study amongst sexually active women attending college demonstrate that consistent and correct use was associated with 70% reduction in HPV transmission.
4. Use of condoms associated with reduced risk of:
  - HPV associated infections
  - Regression of CIN.
  - Clearance of HPV infection in women
  - Regression of HPV associated penile lesions in men

# Cont..

## Male Condoms Cont..

5. Condoms regulated as medical devices and are subjected to FDA for approval. They are tested electronically for holes before packaging. Rate of breakage in US is 2 per 100 condoms.

For those with latex allergy, other condoms made of polyurethane or other synthetic material, although are associated with higher breakage and slippage rates compared to latex condoms.

Other type is natural membrane condoms i.e. called nTural or lambskin made from lamb caecum and have pores up to 1500nm in diameter, but they are more than 10 times diameter of HIV and 25 times that of HBV(29). hence not recommended.

# Cont..

## Male Condoms Cont..

Current recommendations for correct use are:

- Use a new condom with each act of sex.
- Carefully handle with care to avoid damage with fingernails, teeth or sharp objects.
- Put on condom when penis is erect and before any genital, oral or anal contact with partners.
- Use only water based lubricants e.g. KY jelly, aqualube, glycerin and not oil based e.g. body oils, massage lotions, cooking oil as they weaken latex.
- Ensure adequate lubrication during vaginal and anal sex.
- To prevent condom from slipping off, hold condom firmly against base of penis during withdrawal and withdraw while penis is still erect.

# Female Condoms:

First one created consisted of lubricated polyurethane sheath with ring on each end inserted into the vagina,

Newer version made from nitrile now avail.

Limited studies done on use of female condoms in preventing STIs including HIV.

# Cervical Diaphragms:

Protect against gonorrhoea, chlamydia and trichomoniasis.

Recent trial compared use of diaphragms plus polycarbophil lubricant versus use of male condom but there was no additional protective effect with diaphragms.

Diaphragms shouldn't be used as sole protection against HIV.

# Topical Microbicides & Spermicides:

- Eg buffer gel, Carraguard (carrageenan derivative), cellulose sulphate (HIV entry inhibitor), Savvy.
- Based on various studies not shown to be effective for prevention.
- however recent studies with 0.5% PRO2000 vaginal gel daily reduces rate of HIV acquisition by 30% relative to no gel.
- Topical ARVs eg use of Tenofovir gel during sex reduced transmission by 39% in an study of S.A women.
- others include VivAgel, topical vaginal microbicides.

# Condoms & N-Vaginal Spermicides

- They aren't more effective than other lubricated condoms.
- N-9 has been assoc. with disruption of vaginal epithelium hence increased risk of HIV transmission .

# Others

- Non barrier contraception, Surgical Sterilization and Hysterectomy.
- They aren't mechanical barriers hence don't offer any protection against HIV or STDs.



# Male Circumcision:

- It reduces risk for HIV and some STDs in heterosexual men.
- Three RCTs done in sub Saharan Africa where generalized epidemics of HIV involving heterosexual men reduced acquisition of HIV by 50-60%, also protective against genital herpes and high risk genital HPV infection.
- However no data shows reduced risk of HIV transmission in MSM who are circumcised.
- WHO and UNAIDS have recommended male circumcision be scaled up as an effective intervention against heterosexually acquired HIV infection.

# Emergency Protection:

- Its offered to those women exposed to STDs during recent act of unprotected intercourse and are at risk of pg.
- Its ineffective if woman is pg but neither is it harmful.
- Insertion of IUD upto 7days after unprotected sex can reduce pg risk by more than 99% but its C/I in those with untreated Chlamydia or gonorrhoea.

# PEP for HIV&STD's

- Genital hygiene after sexual exposure are ineffective in protecting against HIV and STDs and might increase risk instead .
- HIV infected persons reduces viral load and presumably infectiousness.
- In HIV uninfected persons it reduces susceptibility to infection. RCT involving S.A women demo use of Tenofovir gel assoc with sexual intercourse reduced rates of transmission of HIV and HSV-2 by 39and 51% respectively.
- Retesting to detect repeat infections  
This is done to enhance population based prevention.

# Partner Management

- Continuum of activities designed to increase no.of infected persons brought to treatment and disrupt transmission networks.
- Providers can ask patients to bring partners witness them when returning for treatment
- Patient delivered partner Therapy(PDPT)  
it's a form of Expedited Partner Therapy in which infected persons are treated without prior medical evaluation and patient counseling.
- Another form is Internet Partner Notification.(IPN).

# Reporting & Confidentiality:

- It's integral to efforts to assess morbidity trends, allocated resources and assist local Health authorities in partner notification and treatment.

# STUDIES FOR REFERENCE:PUBMED

- Baseline Std prevalence in a community in Kenya and their use of female condoms.
- Health-care seeking behaviour related to transmission of STD's in Kenya.
- Health and Demographic surveillance in rural Western Kenya.
- Male Circumcision for prevention of HIV and other STD's.

# Family Planning

## TYPES

- Combined oral contraceptive pill
  - Both estrogen and progesterone
- Progesterone only
  - DMPA (Depo), Norygynon, Noristerat
  - Jadelle
  - Implanon
  - Progesterone only pill
- IUD-Copper T, Mirena
- Barrier methods-condoms
- Surgical sterilization
- Dual method is the best for HIV-infected
- Others –Emergency pill Patch Vagina/Cervical Ring

# Benefits of Family planning

- Economic
- Social
- Health benefits ie preventing pregnancy related health risks in women
- Reducing infant mortality
- Preventing HIV/AIDS
- Empowering people and enhancing education



# Family planning providers

- Health care workers role
- Chemist/Pharmacy shop role
- Community Health workers role