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Outline

- What is PrEP? What is PEP?
- How effective is it?
- Who is PrEP for?
- Why is PrEP important?
- What are the concerns about PrEP?
- How can PrEP be delivered?
What is PrEP?

• Pre-exposure prophylaxis (PrEP) is a prevention strategy in which people without HIV take oral antiretroviral drugs before exposure to HIV to reduce their risk of acquiring HIV

• An oral tablet containing tenofovir (+FTC or 3TC)
  • WHO currently recommends daily PrEP
PrEP is not PEP!

• Post-exposure prophylaxis (PEP) is a prevention strategy in which people without HIV take antiretroviral drugs *after* exposure to HIV to reduce their risk of acquiring HIV

• *Must be commenced within 72 hours and taken for 28 days post exposure*

• PEP for people with occupational and non-occupational exposure is an important additional tool
PrEP is effective when taken!
Who is PrEP for?

- WHO recommends oral PrEP containing tenofovir as an **additional prevention choice** for ANY person at **substantial HIV risk** as part of combination prevention.

- **Enabling** recommendation
  - **Not population specific**
  - **Substantial HIV risk** (provisionally defined as HIV incidence >3 per 100 person–years in the absence of PrEP)

- An **additional prevention choice** within combination prevention
  - Condoms and lube
  - Harm reduction
  - HIV testing and links to ART
PrEP eligibility – PrEP is not for everyone!

WHO CLINICAL PREP BASICS

Indications for PrEP (by history over the past 6 months):

- HIV-negative AND
- Sexual partner with HIV who is not virally suppressed, OR
- Sexually active in a high HIV incidence/prevalence population AND any of the following:
  - Vaginal or anal sexual intercourse without condoms with more than one partner, OR
  - A sexual partner with one or more HIV risk factors, OR
  - A history of a sexually transmitted infection (STI) by lab testing or self-report or syndromic STI treatment, OR
  - Use of post-exposure prophylaxis (PEP), OR
  - Requesting PrEP.

Contraindications:

- HIV-positive
- Estimated creatinine clearance <60 ml/min
- Signs/symptoms of acute HIV infection, probable recent exposure to HIV
- Allergy or contraindication to any medicine in the PrEP regimen.

Rx (example): TDF 300 mg + FTC 200 mg PO daily #90 tablets.

Counselling: Link tablet use with a daily routine.

Develop a plan for contraception or safer conception and for STI prevention.

More information: http://who.int/hiv/pub/prep/prep-implementation-tool
Why do we need PrEP?

### Behaviour and response

<table>
<thead>
<tr>
<th></th>
<th>MEN WHO HAVE SEX WITH MEN</th>
<th>PEOPLE WHO INJECT DRUGS</th>
<th>FEMALE SEX WORKERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condom use at last sex (%)</td>
<td>60</td>
<td>46</td>
<td>68</td>
</tr>
<tr>
<td>Safe injection practice (%)</td>
<td></td>
<td>89</td>
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<tr>
<td>HIV testing coverage (%)</td>
<td>54</td>
<td>39</td>
<td>38</td>
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Source: Global AIDS Response Progress Reporting and Global AIDS Monitoring 2018
Graph 34: new infections estimates and projection 2015-2020

How does PrEP effect STIs & condoms?

Effects of Pre-exposure Prophylaxis for the Prevention of Human Immunodeficiency Virus Infection on Sexual Risk Behavior in Men Who Have Sex With Men: A Systematic Review and Meta-analysis

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Background. Human immunodeficiency virus (HIV) pre-exposure prophylaxis (PrEP) is effective in reducing HIV risk in men who have sex with men (MSM). However, concerns remain that risk compensation in PrEP users may lead to decreased condom use and increased incidence of sexually transmitted infections (STIs). We assessed the impact of PrEP on sexual risk outcomes in MSM.

Methods. We conducted a systematic review of open-label studies published to August 2017 that reported sexual risk outcomes in the context of daily oral PrEP use in HIV-negative MSM and transgender women. Pooled effect estimates were calculated using random-effects meta-analysis, and a qualitative review and risk of bias assessment were performed.

Results. Sixteen observational studies and 1 open-label trial met selection criteria. Eight studies with a total of 4388 participants reported STI prevalence, and 13 studies with a total of 5008 participants reported change in condom use. Pre-exposure prophylaxis use was associated with a significant increase in rectal chlamydia (odds ratio [OR], 1.59; 95% confidence interval [CI], 1.19–2.13) and an increase in any STI diagnosis (OR, 1.24; 95% CI, 0.99–1.54). The association of PrEP use with STI diagnoses was stronger in later studies. Most studies showed evidence of an increase in condomless sex among PrEP users.

Conclusion. Findings highlight the importance of efforts to minimize STIs among PrEP users and their sexual partners. Monitoring of risk compensation among MSM in the context of PrEP scale-up is needed to assess the impact of PrEP on the sexual health of MSM and to inform preventive strategies.

Keywords. human immunodeficiency virus; pre-exposure prophylaxis; risk compensation; sexual behavior; sexually transmitted infections.
How does PrEP effect STIs?

• Increase in STI risk
  • Increased number of infections related to increased STI testing can be anticipated
  • More frequent STI testing, partner notification can lead to reduced STI transmission
  • **No** evidence to indicate lower PrEP efficacy among persons with STIs
What happens when PrEP is scaled up?
EPIC-NSW: HIV diagnoses in MSM in NSW, Australia, before and after PrEP

Source: C Selvey (October 2018, Presentation, Bangkok Thailand)
Rapidly declining HIV infection in MSM in central London

The Lancet HIV 2017 4, e482-e483DOI: (10.1016/S2352-3018(17)30181-9)
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Rapidly declining HIV infection in San Francisco since introduction of PrEP

Is PrEP just a pill?

• PrEP is a gateway for sexual health services for key populations

Recommended tests
• HIV
• HBAgs
• Creatinine
• Consider HCV (MSM, PWID)

Comprehensive support
• Adherence counselling
• Legal & social support
• Mental health & emotional support
• Contraception & reproductive health services

Regular HIV Testing

Sexual Health

PrEP, condoms etc

STI testing & management
How should PrEP be offered?

Side-effects:
1 in 10 PrEP users may have side-effects such as nausea, abdominal cramps, headache; these are usually mild and resolve over the first month of taking PrEP.
1 in 200 may have creatinine elevation (typically reversible if stop PrEP).
1% average loss of bone mineral density; recovers after stopping PrEP.

Initial tests:
HIV test; suggest Cr, HBsAg, STIs screening (e.g. syphilis, gonorrhoea, chlamydia); consider HCV for MSM.
Every 3 months: HIV test, suggest check STIs, assess PrEP indications and use.
Every 6 months: Suggest Cr.

Special situations:
- Exposure to HIV in the past 72 hours: use PEP for 28 days, then start PrEP.
- Acute viral syndrome: consider re-testing in 1 month before PrEP initiation.
- Pregnancy and breastfeeding: PrEP can be offered and continued.
- If HBsAg negative: consider vaccination; if HBsAg positive: assess HBV treatment indications; consider risk of flare if PrEP stopped.
- Adolescents: may benefit from more frequent appointments e.g. monthly visits.

More information: http://who.int/hiv/pub/prep/prep-implementation-tool
Building demand & informal use
Oral PrEP Global Roll-out, mid-2018
Key messages

• PrEP is highly effective for preventing HIV when used as prescribed
  • Rapid scale-up can significantly reduce new infections

• WHO recommends PrEP is offered as part of a comprehensive combination prevention response
  TEST + TREAT + PREVENT = END HIV
  • PrEP does *not* prevent pregnancy or STIs
  • PrEP should be delivered as a package

• Current epidemic in Indonesia is not decreasing
  • PrEP could be the additional tool to significantly reduce new infections among people at high risk
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