State-of-the-Science: When treatment is prevention, what then do WE mean by prevention?

Who is PrEP for? What is needed for access?

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Controlling the HIV Epidemic with Antiretrovirals:
Leveraging progress, seizing opportunities
Geneva, Switzerland, October 14, 2016
Who is PrEP for? What is needed for access?

Why PrEP?

Who is PrEP for?

- Key populations at higher risk of HIV acquisition
- PrEP and combination prevention: the complementarity of PrEP

Real world findings

- Open label and demonstration projects
- Cost effectiveness and uptake
- Regulatory status
The New Paradigm: Treatment as Prevention

HPTN 052: Treatment as Prevention → Public Health Benefit

START and Temprano Studies: Early Treatment → Individual Health Benefit

Begin treatment at any CD4+ T-cell count
During follow-up, couples reported condomless sex a median of 37 times per year (IQR, 15-71), with MSM couples reporting approximately 22,000 condomless sex acts and heterosexuals approximately 36,000.

No phylogenetically linked transmissions during median follow-up of 1.3 years per couple (upper 95% confidence limit: 0.30/100 couple-years of condomless sex and 0.71/100 couple-years of condomless anal sex)

75 clinical sites in 14 European countries and enrolled 1166 HIV serodifferent couples

AJ Rodger and Coauthors

Sexual Activity Without Condoms and Risk of HIV Transmission in Serodifferent Couples When the HIV-Positive Partner Is Using Suppressive Antiretroviral Therapy

Published July 12, 2016

Available at jama.com and on The JAMA Network Reader at mobile.jamanetwork.com
Why not just rely on TasP? The U.S. Example


Courtesy Ken Mayer
Proportion of people living with HIV with viral suppression **(90-90-90 goal is 73%)**

(40 countries with available data)

www.HIV90-90-90watch.org

Accessed October 13, 2016

Hirnschall October 13, 2016:

**Viral suppression 38% (35-41%)**
Target 3 – Percentage of HIV+ People with HIV RNA suppression - Results

Target 3: 73% of all HIV+ people with HIV RNA Suppression

Note: These match results presented October 13, 2016 by Jeffrey Sachs for Australia, Denmark and France (he had USA at 24.9% whereas this is 30% for under 200)

Francois Venter, AIDS 2015 based on Andrew Hill
HIV prevention with antiretroviral drugs (since 2010)

- Topical pre-exposure prophylaxis (microbicides) for women
  - Abdool Karim Q, Science 2010

- Oral pre-exposure prophylaxis
  - Grant R, NEJM 2010 (MSM)
  - Baeten J, NEJM 2012 (Couples)
  - Thigpen M, NEJM 2012 (Heterosexuals)
  - Choopanya K. Lancet 2013 (PWID)

- Treatment for prevention
  - Cohen M, NEJM 2011

- HIV vaccine
  - Rerks-Ngarm S, NEJM, 2009

- Behavioural Interventions
  - Abstinence
  - Be Faithful

HIV prevention (before 2010)

- Male circumcision
  - Gray R, Lancet 2007

- Treatment of STIs
  - Grosskurth H, Lancet 2000

- Female Condoms
- Male Condoms

- HIV Counselling & Testing
  - Coates T, Lancet 2000

Note: preventing mother-to-child transmission, screening transfusions, harm reduction, structural interventions, etc. have not been included
12 populations being left behind

- I am a person living with HIV. Worldwide, 19 million of the 35 million people living with HIV today do not know that they have the virus.

- I am a young woman. 76% of adolescent girls in sub-Saharan Africa do not have comprehensive and correct knowledge about HIV.

- I am a prisoner. HIV prevalence among prisoners in some settings is 50 times higher than among the general populations.

- I am a migrant. Around the world, 39 countries have an HIV-related travel restriction.

- I am an injecting drug user. Only 55 of 192 countries offer a needle-syringe programme.

- I am a sex worker. HIV prevalence among sex workers is 12 times greater than among the general population.

- I am a man who has sex with other men. Same-sex sexual conduct is criminalized in 78 countries.

- I am a pregnant woman. Only 44% of pregnant women in low- and middle-income countries received HIV testing and counselling in 2013.

- I am a transgender woman. Transgender women are 49 times more likely to acquire HIV than adults of reproductive age.

- I am a child. Of the 3.2 million children under the age of 15 living with HIV, 2.4 million are not accessing antiretroviral therapy.

- I am a displaced person. At the end of 2013, there were 51.2 million people forcibly displaced worldwide.

- I am a person living with a disability. 23% of men with a disability do not return to seek health care because they were treated badly at a previous visit.

- I am 50+. The life expectancy of people aged 50 and older living with HIV and accessing treatment is the same as the life expectancy of others of the same age.
Combination Prevention: Basic Attributes

- **Tailored** to national and local needs and contexts
- Combines **biomedical, behavioural and structural** elements—to reduce both immediate risks and underlying vulnerabilities
- Fully **engages** affected communities, promoting human rights and gender equality
- Operates **synergistically** on multiple levels—individual, family and society
- Invests in **decentralized** and community responses and enhances coordination and management
- **Flexible**—adapts to changing epidemic patterns and can rapidly deploy innovations

Adapted Hankins & De Zalduondo *AIDS* 2010
Global HIV prevalence among MSM, 2007-2011

HIV Prevalence among MSM in Africa

HIV Incidence among MSM in Kilifi, Kenya

Source: Sanders, Mugo, van der Elst, Smith, Graham. High HIV-1 incidence, correlates of HIV-1 acquisition, and high viral loads following seroconversion among MSM JAIS ,2013

Courtesy Stef Baral
Estimated population size of sex workers, with the estimated proportion who are HIV-positive, in selected countries

- **India**: 868,000, 2.8%
- **Brazil**: 546,848, 4.9%
- **Mexico**: 237,798, 7%
- **Nigeria**: 236,146, 24.5%
- **Haiti**: 176,400, 8.4%
- **Thailand**: 123,530, 3.2%
- **Morocco**: 85,000, 2%
- **Ukraine**: 80,000, 7.3%
- **Cameroon**: 38,582, 36.8%
- **Cambodia**: 37,000, 14.7%
- **Burundi**: 27,546, 22.5%
- **Rwanda**: 12,278, 50.8%

Pooled OR for HIV infection among FSW compared to other women of reproductive age (Baral et al Lancet ID 2012)

**13.49 (95% CI 10.04-18.12)**

*Source: UNAIDS*
Theoretical framework of social capital and HIV-related risk among female sex workers in Swaziland.

http://127.0.0.1:8081/plosone/article?id=info:doi/10.1371/journal.pone.0087527

Courtesy Stef Baral
Burden of HIV among Transgender Women

- Pooled OR for HIV infection among transgender women compared to other people of reproductive age
  - 48.8 (95% CI 31.2-76.3)

UNODC World Drug Report 2015

- 246 million people aged 15-64 years used an illicit drug in 2013 (> 1 out of 20 people)
- 27.4 million people are problem drug users (>10% of all drug users)
- 12.2 million people who use drugs (PUD) are people who inject drugs (PWID)
- 1.7 million PWID are living with HIV

HIV prevalence among PWID by region

<table>
<thead>
<tr>
<th>Region</th>
<th>HIV Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>11.2%</td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>22.8%</td>
</tr>
<tr>
<td>West and Central Europe</td>
<td>7.6%</td>
</tr>
</tbody>
</table>
Combination Prevention to Optimize Intervention Coverage and Efficacy when Force of Infection is High: Nairobi

Strathdee et al. Lancet 2010

Number of HIV infections in IDUs, 2010-15

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Efficacy</th>
<th>HIV infections in IDUs</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSP</td>
<td></td>
<td>20%</td>
</tr>
<tr>
<td>80% NSP + OST</td>
<td>80%</td>
<td>40%</td>
</tr>
<tr>
<td>80% NSP + 80% OST + ART</td>
<td>80%</td>
<td>60%</td>
</tr>
<tr>
<td>Estimated efficacy</td>
<td></td>
<td>80%</td>
</tr>
<tr>
<td>Increased efficacy</td>
<td></td>
<td>80%</td>
</tr>
</tbody>
</table>
I am a young woman. I face these issues.

Girl Effect
http://www.girleffect.org/about-us/breaking-through-invisible-barriers
Young women at high HIV risk: Who? Why? What works?

Who - source of infection? Why so vulnerable? What works for prevention?

Who?

Why?

What works?

Young women at high HIV risk

Courtesy Slim Abdool Karim
Community-wide phylogenetic study

- Cross-sectional multi-stage random sampling
- Duration: 2014 - 2016
- 86% consent rate
- People tested for HIV: 9,812
- HIV positive: 36.3% (CI: 35-38) (n=3,969)
- Knew HIV+ status: 59.8% (n=2,337)
- On ARVs: 42.3% (n=1,590)
- Viral load >1000: 47.1% (n=1,847)

Location of Greater Edendale and Vulindlela study area in KwaZulu-Natal, South Africa

Credit: Courtesy Slim Abdool Karim
HIV prevalence rises earlier and faster in women, peaking at 66.4% in the 30s.
Most men & women 25-40 years acquire HIV from similarly aged partners (Mean age difference = 1.1 years)

Community HIV prevalence: 40.3%

Men 25-40 years (N=79)
Knew HIV status: 21.5%
VL > 50,000 : 37.1%

39% of the men linked to a woman < 25 are simultaneously also linked to a woman 25-40 years

Most young women <25 years acquire HIV from older men (Mean age difference = 8.7 years)

Community HIV prevalence: 22.3%

Young women <25 years (N=43)
Knew HIV status: 23.3%
62% of male partners are 25-40 years

Community HIV prevalence: 22.3%

When young women reach >25 years they continue the cycle

Women 25-40 years (N=56)
Knew HIV status: 42.6%
63% of male partners are 25-40 years

Community HIV prevalence: 59.8%

Most men & women 25-40 years acquire HIV from similarly aged partners (Mean age difference = 1.1 years)

Courtesy Slim Abdool Karim
Women who later became HIV-infected had pre-infection genital inflammation – what is the cause?

Only 20% of HIV infections could be attributed to an STI

*T. vaginalis* was the most strongly predictive of genital inflammation

Courtesy Slim Abdool Karim
## Association between genital inflammation and HIV acquisition

<table>
<thead>
<tr>
<th></th>
<th>HIV+</th>
<th>HIV-</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genital inflammation present*</td>
<td>19</td>
<td>6</td>
<td>25</td>
</tr>
<tr>
<td>Genital inflammation absent</td>
<td>39</td>
<td>52</td>
<td>91</td>
</tr>
<tr>
<td>Total</td>
<td>58</td>
<td>58</td>
<td>116</td>
</tr>
</tbody>
</table>

**Odds Ratio** 3.2 (95% CI: 1.3 – 7.9)

**p-value** 0.014

*Women with 5 or more pro-inflammatory cytokines or chemokines (MIP-1a, MIP-1b, IL-8, IP-10, TNF-a, MCP-1, IL-6, IL-1a, IL-1b) above the 75th percentile

Significant after adjusting for age, urban/rural, condom use, hormonal contraceptives, number of sex acts, number of returned used applicators, HSV-2 status

Courtesy Slim Abdool Karim
Combination prevention to break the cycle of HIV transmission

Men 25-40 years (N=79)
- Knew HIV status: 21.5%
- VL > 50,000: 37.1%

Making circumcision for HIV negative men <25
& Antiretroviral therapy for HIV positive men

Young women <25 years (N=43)

Women 25-40 years (N=56)

- PrEP
- Changing community norms on age-disparate sex & patriarchy
- Test & Treat

Courtesy Slim Abdool Karim
Scale-up PrEP implementation in women - with BV screening & treatment

One approach: Integration of PrEP scale-up with sexual & reproductive health services ie. STI & FP services

Link to SRH services

Vaginal pH testing

Metronidazole treatment to promote a “healthy” (Lactobacillus dominant) vagina

If pH > 4.5

Courtesy Slim Abdool Karim
Results of placebo-controlled randomised controlled trials assessing ARV PrEP effectiveness

<table>
<thead>
<tr>
<th>Prevention in injecting drug users</th>
<th>Effect size (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangkok tenofovir study: daily oral tenofovir (injecting drug users in Thailand)</td>
<td>49% (10 to 72)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prevention of mother-to-child transmission</th>
<th>Effect size (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PACTG076: zidovudine to mother during pregnancy and labour and infant (HIV-positive pregnant women in USA and France)</td>
<td>68% (40 to 82)</td>
</tr>
<tr>
<td>Thai AZT trial: zidovudine to mother during pregnancy and labour (HIV-positive pregnant women in Thailand)</td>
<td>50% (15 to 71)</td>
</tr>
<tr>
<td>HIVNET012: single dose nevirapine to mothers and infants (HIV-positive pregnant women in Uganda)</td>
<td>41% (16 to 59)</td>
</tr>
<tr>
<td>DITRAME: zidovudine to mother during pregnancy, labour, and post partum (HIV-positive pregnant women in Côte d’Ivoire and Burkina Faso)</td>
<td>38% (5 to 60)</td>
</tr>
<tr>
<td>Africa AZT: zidovudine to mother during pregnancy and labour (HIV-positive pregnant women in Côte d’Ivoire)</td>
<td>37% (-5 to 63)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sexual transmission prevention</th>
<th>Effect size (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partners PrEP: daily emtricitabine and tenofovir (serodiscordant couples in Kenya and Uganda)</td>
<td>75% (55 to 87)</td>
</tr>
<tr>
<td>Partners PrEP: daily oral tenofovir (serodiscordant couples in Kenya and Uganda)</td>
<td>67% (44 to 81)</td>
</tr>
<tr>
<td>TDF2: daily emtricitabine and tenofovir (heterosexual men and women in Botswana)</td>
<td>62% (22 to 83)</td>
</tr>
<tr>
<td>iPrEx: daily emtricitabine and tenofovir (men who have sex with men in the Americas, Thailand, and South Africa)</td>
<td>44% (15 to 63)</td>
</tr>
<tr>
<td>CAPRISA 004: coital tenofovir gel (women in South Africa)</td>
<td>39% (6 to 60)</td>
</tr>
<tr>
<td>MTN003/VOICE: daily tenofovir gel (women in South Africa, Uganda, and Zimbabwe)</td>
<td>15% (-21 to 40)</td>
</tr>
<tr>
<td>FEMPrEP: daily emtricitabine and tenofovir (women in Kenya, South Africa, and Tanzania)</td>
<td>6% (-52 to 41)</td>
</tr>
<tr>
<td>MTN003/VOICE: daily emtricitabine and tenofovir (women in South Africa, Uganda, and Zimbabwe)</td>
<td>-4% (-49 to 27)</td>
</tr>
<tr>
<td>MTN003/VOICE: daily tenofovir (women in South Africa, Uganda, and Zimbabwe)</td>
<td>-49% (-129 to 3)</td>
</tr>
</tbody>
</table>
Adherence drives trial results: Consistent adherence to daily drug gives high levels of protection

<table>
<thead>
<tr>
<th>CASE-CONTROL / CASE-COHORT ANALYSES: DETECTION OF TENOFOVIR IN PLASMA</th>
<th>HIV seroconverters</th>
<th>HIV uninfected</th>
</tr>
</thead>
<tbody>
<tr>
<td>iPrEx</td>
<td>9%</td>
<td>51%</td>
</tr>
<tr>
<td>Partners PrEP: TDF arm</td>
<td>35%</td>
<td>83%</td>
</tr>
<tr>
<td>Partners PrEP: FTC/TDF arm</td>
<td>25%</td>
<td>81%</td>
</tr>
</tbody>
</table>

Relative risk reduction associated with detectable tenofovir

- **iPrEx:** 92% (95% CI 40-99%), p<0.001
- **Partners PrEP TDF:** 86% (95% CI 57-95%), p<0.001
- **Partners PrEP FTC/TDF:** 90% (95% CI 56-98%), p=0.002

Courtesy J Baeten
Relationship Between Effectiveness and Adherence in Topical and Oral PrEP Trials

Percentage of participant samples with detectable drug levels

SS Abdool Karim, personal communication
Systemic Versus Topical Administration

Tenofovir and emtricitabine are phosphorylated intracellularly to form active agents that inhibit HIV replication.

Tenofovir diphosphate concentrations are:
- **100-fold higher** in rectal tissue than in cervicovaginal tissue with oral TDF/FTC [Patterson 2011]
- **1000-fold higher** in vaginal tissues with tenofovir gel than with oral TDF/FTC [Dumond 2007, Gengia 2012]

Figure 3. Boxplots of TFV and TFV-DP concentrations by anatomic site.
Key requirements for effective PrEP

- Right drug (safe, effective, minimal resistance)
- Right place (sufficient concentrations at site of HIV exposure)
- Right time (short onset of activity and long half-life to optimize efficacy with variable adherence)
- Right population (at risk, motivated to use)
- Right timing (during periods of highest risk)
- Right delivery (cost-effective and efficient)
- Right decision-making (equity issues: prioritising key populations at highest risk of exposure – MSM, SW, PWID, young women while fully scaling up ART)

Adapted from C Celum
Modelling PrEP cost and impact

The Cost and Impact of Scaling Up Pre-exposure Prophylaxis for HIV Prevention: A Systematic Review of Cost-Effectiveness Modelling Studies

Gabriela B. Gomez¹*, Annick Borquez², Kelsey K. Case², Ana Wheelock³, Anna Vassall⁴, Catherine Hanks¹,⁴

1 Department of Global Health, Academic Medical Centre, University of Amsterdam and Amsterdam Institute for Global Health and Development, The Netherlands, 2 School of Public Health, Imperial College London, United Kingdom, 3 Centre for Patient Safety and Service Quality, Imperial College London, United Kingdom, 4 London School of Hygiene and Tropical Medicine, United Kingdom

- 13 studies of cost and impact among heterosexual couples, men who have sex with men (MSM), people who inject drugs (PWID) in generalised and concentrated epidemics in southern Africa, Ukraine, USA, and Peru

- Cost-effectiveness depends on cost, epidemic context, PrEP programme coverage, prioritisation strategies, and adherence

- Most cost-effective strategy: delivery of PrEP to key populations at highest risk of HIV exposure

Gomez et al PLoS Medicine 2013

Individual PrEP demonstration projects with emtricitabine/tenofovir DF

- 32 projects in 16 countries
- 8478 participants with 7061 cumulative years exposure

HIV seroconversion rate was 0 in

- 17 projects with 2467 participants
- Follow-up: 1315 person-years exposure

Total HIV seroconversions (n=67) in 15 projects

Highest rates in MSM 18 to 25 years of age (7.7/100 person-years)

Available intracellular data showed undetectable or very low TFV-DP levels (<2 tablets/ week) in nearly all of those with seroconversion

HIV Seroconversion Rates

Overall rate: 0.96 (0.7-1.20)

Post-trial cohort: ATN 082, iPrEx, US Safety Study

- 72-week open label extension n=1603 [76% took PrEP]
- Uptake, adherence, sexual practices in clinical practice
- Use dried-blood spot (DBS) and plasma tenofovir levels, integrated next-step counselling
- Those with riskier sexual practices and STI more likely to join the study

PrEP and HIV incidence

ANRS Ipergay Trial Open-Label Extension Study: Efficacy of On-Demand PrEP in High-Risk MSM

- Median follow-up: 18.4 months
- New STIs during OLE (33%)
- Generally well tolerated
  - Drug-related GI AEs (10%)
- Sexual behaviour
  - No significant difference compared with double-blind phase
- Single HIV infection
  - No PrEP use in 40 months
  - Emtricitabine or tenofovir not detectable at time of HIV diagnosis
- Estimated efficacy
  - 97% relative reduction in HIV transmission versus placebo

HIV Seroconversion Rates


Courtesy Ken Mayer
Couple ART and PrEP use over time in Partners Demonstration Project in Kenya and Uganda

Source: Baeten et al
PLoS Medicine 2016
Partners Demonstration Project: HIV Incidence

- Observed HIV infections (n=4, none with resistance to PrEP)
  - No detectable TDF (n=3)
  - Declined PrEP, had multiple partners (n=1)
- Reduction in HIV incidence compared with expected ($P<0.0001$)
  - Overall: 95%
  - Males: 97%
  - Females: 93%
  - HIV- partner <25 years of age: 95%
  - Baseline HIV RNA ≥50K copies/mL: 95%


HIV Incidence

- Expected: $4.9$ (per 100-person-years)
- Observed: $0.2$ (95% Reduction, $P<0.0001$)

Courtesy Ken Mayer
Pre-exposure prophylaxis strategies

- **Tenofovir (TDF)**
- **Tenofovir/emtricitabine TDF/FTC**
- **iPrEx**
- **Partners**
- **Aspire and IPM trials**
- **CAPRISA 004**

**Topical PrEP:** 1% tenofovir gel

**Injectable PrEP:** subcutaneous or intramuscular (Phase 1 trials)

**Intermittent PrEP trials**
How to improve chemoprophylaxis effectiveness?

New oral PrEP drugs and dosing strategies

Novel adherence strategies

Hard-to-reach populations; PWUD

Alternative delivery systems and formulations

Vaginal & Rectal Microbicides (MTN 017)

Intravaginal rings (Dapivirine, Tenofovir) +/- Contraception

Injectables: ARVs and mAbs (Cabotegravir, VRC01)

Courtesy Ken Mayer
Cabotegravir development

HPTN: HIV Prevention Trials Network
*HPTN 077 included both men and women

Courtesy Mike Cohen
Long-acting biomedical prevention

- Long acting (LA) injectables: HPTN 083 & 084 to test LA INSTI: Cabotegravir q 8 weeks; safe in Phase II study (Éclair)
- Infusion of broadly neutralizing antibodies – HPTN 081 & 085 to test VRC01 q 8 weeks; others coming
- Building on the results of Thai vaccine study RV144 (2 vaccines to stimulate antibodies and CTLs), HVTN beginning combination vaccine study in Africa
- Altering microbiome (Abdool Karim, IAS 2016)
- TDF/FTC is PrEP 1.0, what we have now

Courtesy Ken Mayer
TREATMENT NEWS

Gilead Plans Major Clinical Trial of Descovy vs. Truvada as PrEP

Descovy is an updated version of Truvada containing a new form of the drug tenofovir that is safer for bones and the kidneys, at least among those with HIV.

emtricitabine (FTC) with tenofovir alafenamide (TAF) versus emtricitabine (FTC) with tenofovir disoproxil fumarate (TDF)
Research and Development Pipeline

- Vaginal and rectal gels
- Silicon rings
- Oral
- Injectable
- Segmented Rings
- Rings with other polymers
- Pod Rings
- Other gels
  - pH transition
  - Subliming Solid matrix
- Devices +/- Gels
- Vaginal Films
- Quick Dissolve Tablets
- Implants
- Drug in nanoparticles for films & rings
Unique Individuals Starting FTC/TDF for PrEP in USA 2012 to 2015 (by quarter)

79,684 unique individuals started FTC/TDF for PrEP:
1,671 in Q4 2012 → 14,000 in Q4 2015

738% increase

Courtesy Ken Mayer
FTC/TDF for PrEP Utilization Compared With Population and New HIV Infections


Total FTC/TDF for PrEP Utilization by Race/Ethnicity, Sept 2015, US


FTC/TDF for PrEP use among AA and Hispanics is low relative to the rate of new HIV infections

b. These data represent 43.7% (n=21,463) of unique individuals who have started TVD for PrEP from 2012-3Q2015.

Courtesy Ken Mayer
Shocked HIV Charities Blast NHS For “U-Turn” On Drug That Prevents HIV

The NHS has scrapped plans to make Truvada available, prompting fury from HIV organisations.

posted on Mar. 21, 2016, at 7:28 p.m.

Patrick Strudwick
BuzzFeed LGBT Editor, UK

Courtesy Ken Mayer
Buy PrEP Now

Where to buy PrEP online, now, in the UK

So far we have independently verified 4 different companies who reliably sell PrEP that you can trust. For full details on our independent verification process, click here.

United Pharmacies UK (£44 per month)

United Pharmacies UK is our personally recommended supplier of PrEP, you do not need to upload a prescription after purchasing and they have some of the cheapest prices on the internet. In addition to independently verifying their product, we also use United Pharmacies to buy PrEP ourselves. The only minor issue is that due to running out of stock, orders occasionally have a delay of around 1 - 2 weeks.

1 months supply = £45.79 per month.
3 months supply = £41.69 per month, (£125.07 in total).
Delivery to the UK costs £6.75 and takes 7 - 14 business days.
Where do you fit on the map?

Communities across the globe are at varying stages of implementation of daily oral PrEP. TDF/FTC is approved for use as oral PrEP in a handful of countries, and access is expanding globally. In some places there is growing uptake; in others, access is limited to pilot projects. Other countries are not yet exploring implementation. Learn more about access and advocacy below.

Countries with PrEP demonstration projects:
- Australia
- Belgium
- Brazil
- Canada
- France
- India
- Kenya
- Malawi
- Netherlands
- Nigeria
- Peru
- South Africa
- Thailand
- Uganda

Countries without current access to PrEP:
- United Kingdom
- United States of America
- Zambia
- Zimbabwe

Learn about access

http://www.prepwatch.org/
1. Approved for off-label use.
2. The European Commission granted Gilead marketing authorization for Truvada as PrEP in Q3 2016. This should encourage countries within the EU to make PrEP available within their national health systems, based on cost factors and individual country regulatory requirements.

AVAC Updated August 2016
Who is PrEP for? What is needed for access?

Why PrEP?
Who is PrEP for?
- Key populations at higher risk of HIV acquisition
- PrEP and combination prevention: the complementarity of PrEP

Real world findings
- Open label and demonstration projects
- Cost effectiveness and uptake
- Regulatory status
Contribution of PrEP to controlling the HIV epidemic

Nothing will ever be attempted if all possible objections must first be overcome.

Samuel Johnson 1709-1784
Thanks for ideas, photos, and slides to:

- Ken Mayer
- Stefan Baral
- Myron Cohen
- Jared Beaton
- Salim Abdool Karim
- Mitchell Warren
- Nelly Mugo
- Francois Venter
- Connie Celum
- Quarraisha Abdool Karim
- Jared Baeten
- John Mellors
- Ambassador D. Birx
- Andrew Hill
- Anton Pozniak
“Be creative and think big to tackle the real problems”

Joep Lange
September 25, 1954 - July 17, 2014