



HIV: How to Reach the Most Vulnerable Populations

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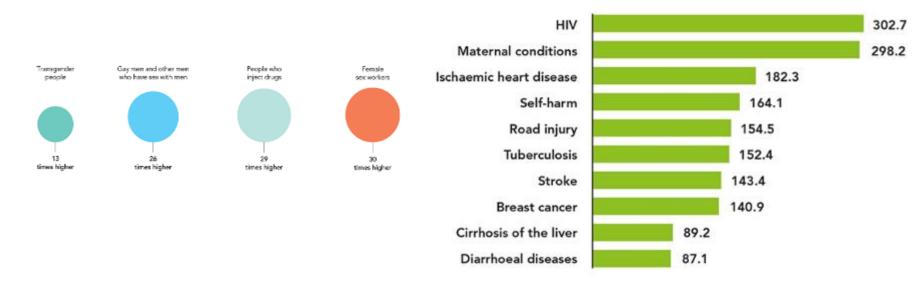
International HIV and Chronic Disease Care Clinical Research Unit, Dept Medicine

www.swisstph.ch/hiv-and-chronic-diseases

Who is vulnerable?

Key Populations globally

Girls and young women: key population in Africa



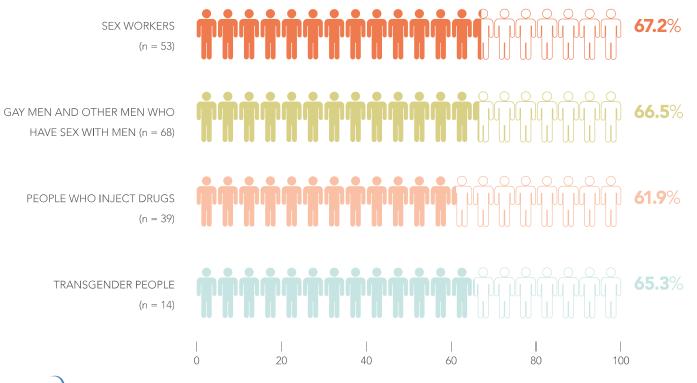
Risk of acquiring HIV as compared to background incidence

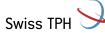
Swiss TPH

Causes of death in women 15-49 years globally

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Key populations who know their status





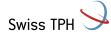
Global distribution of new infections



Clients of sex workers and other sexual partners of key populations

People who inject drugs

Gay men and other men who have sex with men



Reaching key populations: change policies and laws! (I)

Criminalization of sex work

Risk to acquire HIV 8 times higher in countries with discriminatory laws for sex workers

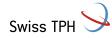


- Selling and buying sexual services criminalized
- Selling sexual services criminalized.
- Buying sexual services criminalized
- Partial criminalization
- Other punitive regulation
- Not subject to punitive regulation /not criminalized
- Issue determined /differs at subnational level
- Data not available

HIV incidence among MSM increased by 25% between 2010 and 2019

Criminalization of same-sex relationships

- Death penalty
- Imprisonment 15 years to life
- Imprisonment up to 14 years
- Relationship between males is illegal, n
- Promotion ("propaganda") laws limiting
- Laws penalizing same-sex sexual acts de
- Data not available



4 Biomedical interventions for prevention



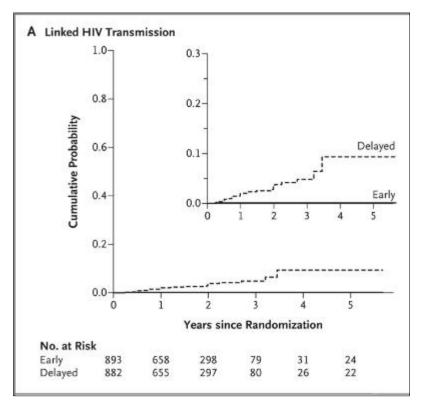


Condoms



Voluntary Male Medical Circumcision (VMMC)

Treatment is Prevention (1)



Cohen MS et al. N Engl J Med 2011;365:493-505. Swiss TPH

	HIV-Negative Members of Eligible Couples Reporting Specific Sex Act, No./Total (%)	Couple-Years of Follow-up		Upper 95% Confidence Limit
All				
Any sex	863/866 (99.7)	1238		0.30
Vaginal sex	532/878 (60.6)	629	# 1	0.59
Anal sex	449/849 (52.9)	522		0.71
Insertive analisex	363/862 (42.1)	417		0.88
Receptive anal sex with ejaculation	185/864 (21.4)	166		2.23
Heterosexual women				
Any sex	261/262 (99.6)	381		0.97
Vaginal sex with ejaculation	193/259 (74.5)	246	• • • • • • • • • • • • • • • • • • •	1.50
Vaginal sex without elaculation	207/257 (80.5)	238	· • •	1.55
Anal sex	61/256 (23.8)	60	•	6.16
Receptive anal sex with ejaculation	37/255 (14.5)	29	•	12.71
Receptive anal sex without ejaculation	55/253 (21.7)	45		8.14
Heterosexual men			-	
Any sex	272/274 (99.3)	418	•	0.88
Vaginal sex	271/275 (98.5)	383	• 1	0.96
Analisex	60/264 (22.7)	47		7.85
Insertive analisex	60/264 (22.7)	47		7.85
Men who have sex with men			-	
Any sex	330/330 (100)	439	÷ •	0.84
Anal sex	328/329 (99.7)	415	• • ·	0.89
Insertive anal sex	303/329 (92.1)	370	• •	1.00
Receptive anal sex with ejaculation	148/329 (45.0)	137		2.70
Receptive anal sex without ejaculation	217/324 (67.0)	220	0 2 4 6 8 10 12	1.68
			Rate of Within-Couple Transmission, per 100 Couple-Years of Follow-up	

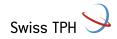
JAMA. 2016;316(2):171-181. doi:10.1001/jama.2016.5148

Treatment is Prevention (2)

		Number of linked transmissions	Upper 95% Cl limit*	Couple- years of follow-up	Number of condomless sex acts	HIV-negative men reporting sex act, n/N (%)†
Condomless anal sex (0	0.23	1593	76088	778/779 (99·9%)
Insertive condomless anal sex		0	0.27	1343	52087	709/777 (91-2%)
Receptive condomless anal sex with ejaculation		0	0.57	650	20487	436/776 (56·2%)
Receptive condomless anal sex without ejaculation		0	0-43	865	22995	577/773 (74-6%)
Any condomless sex with an STI‡		0	3.17	116	6090	NA
	0 0.2 0.4 0.6 3.4	1				
	Rate of within-couple HIV transmission					

(per 100 couple-years of follow-up)

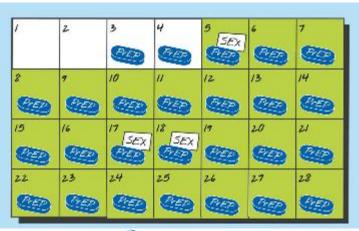
Lancet 2019; 393: 2428–38 http://dx.doi.org/10.1016/S0140-6736(19)30418-0



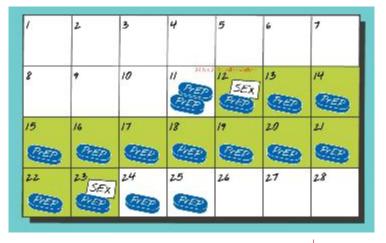
PrEP with TDF/FTC: >90% efficacy

- lower efficacy in women
- challenge of long-term adherence







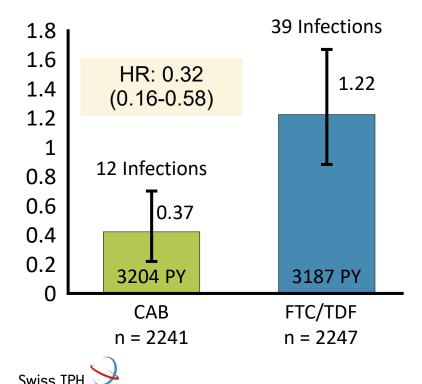




PrEP: Cabotegravir i.m. once every 2 months

HPTN 083: MSM and TGW

HPTN 084: Cisgender women



Characteristic	CAB (n = 1614)	TDF/FTC (n = 1610)		
HIV infections, n	4	36		
Person-yrs	1953	1939		
HIV incidence per	0.2	1.86		
100 person-yrs (95% CI)	(0.06-0.52)	(1.30-2.57)		

Marzinke. CROI 2021. Abstr 153 Delany-Moretlwe. HIVR4P 2021. Abstr HY01-02

I CAN GIVE YOU Honor, Idealism, Vitality.



UNDETECTABLE = UNTRANSMITTABLE

CAN'T GIVE U