

The science of U=U



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www.i-Base.info

Disclosure

No personal financial conflict of interest

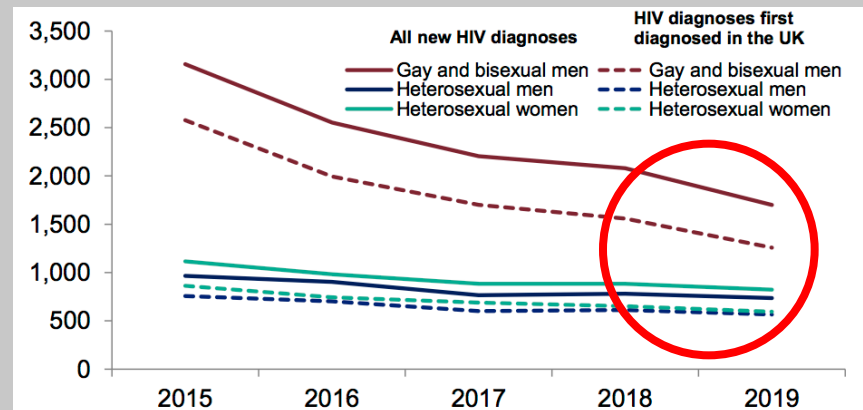
But... I am HIV positive and I think pharma companies should support community projects from their profits with unconditional grants.

Overview

- Introductions, i-Base
- U=U evidence timeline
- Doctors responses in the UK
- Community responses in the UK

UK Combination prevention

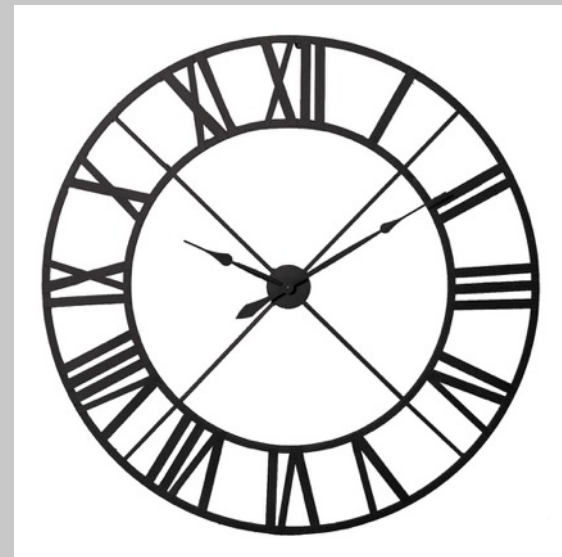
- Significant HIV drop for last 3 years (even though more testing and less condoms).
- Regular HIV testing, more often.
- Early ART (within a week).
- Nice clinics, free PrEP
- Lock down/COVID: stopped most monitoring, PrEP continued etc



Public Health England. <https://www.gov.uk/government/publications/hiv-in-the-united-kingdom>

U=U...

- Is now a FACT.
- Originally a lot of people hated the idea.
- Many HIV positive people worried.
- Many doctors worried.
- Evidence took 20 years – just like PrEP (1994 to 2012)
- Perhaps be angry this took so long – and that we are still fighting.



Evidence and proof

<http://i-base.info/htb/32308>

Different types of studies all showed U=U.

Expert opinion.

Observational studies – just watching a group.

Evidence review – of many different studies.

Randomised studies (but still with condoms used)

Large observational study without condoms and with diaries to calculate risk.

Evidence and proof

<http://i-base.info/htb/32308>

1998 US guidelines ^[1] and ART preventing MTCT ^[2]

2000 Rakai cohort ^[3]

2008 Swiss statement – challenge to publish cases ^[4]

2011 HPTN-052 ^[5]

2014 PARTNER 1 ^[6]

2018 PARTNER 2 ^[7]

← 2009 PARTNER starts

← 2016 U=U launch

1. DHHS, 1998; 2. Beckerman K et al IAS 1998; 3. Quinn T et al, NEJM 2000; 4. Vernazza P et al; 5. Cohen et al, NEJM 2011; 6. Rodgers A et al. CROI 2014 and JAMA 2016; 7. Rodgers A et al, IAS 2018 and The Lancet, 2019.

Evidence 1998

<http://i-base.info/htb/32308>

1998 US guidelines ^[1]
and ART in pregnancy. ^[2]

Major US guidelines: ART could reduce transmission... (still need condoms).

ART in pregnancy reduced risk to babies to almost zero.

1. DHHS, 1998; 2. Beckerman K et al IAS 1998



* £50 ebay



Evidence 2000

<http://i-base.info/htb/32308>

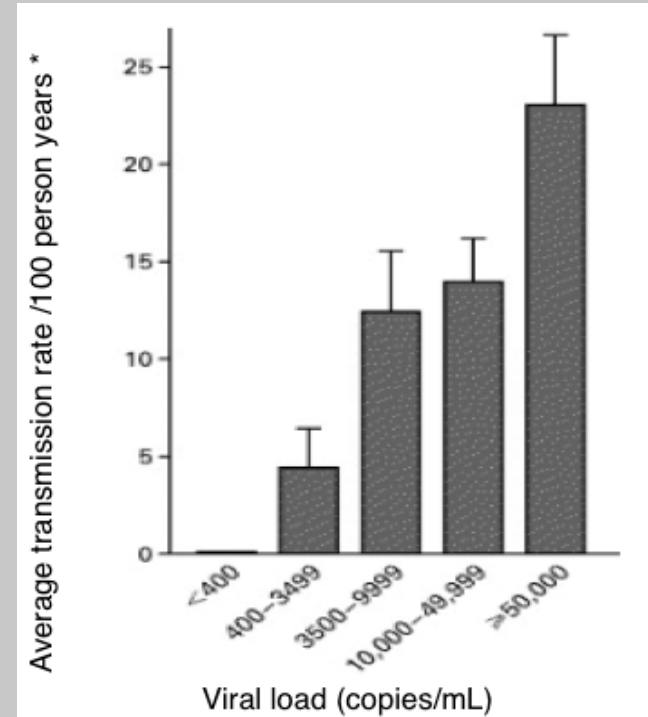
2000 Rakai cohort [3]

400 heterosexual couples

Observational study

No treatment – just link to viral load

3. Quinn T et al, NEJM 2000



Evidence 2008

<http://i-base.info/htb/32308>

2008 Swiss statement
challenge to publish cases [4]

Experts review 20+ studies inc.
“spermwashing”

Zero risk – safe to conceive a baby
WITHOUT condoms.

4. Vernazza P et al;



Evidence 2011

<http://i-base.info/htb/32308>

2011 HPTN-052 [5]

Large randomised study:
Early ART vs late ART
1700 serodifferent couples

All transmission were in
couples without ART.

5. Cohen et al, NEJM

1700 couples

1/28
early with
high VL

27/28
no ART

96% reduction

Evidence 2014, 2016, 2018

<http://i-base.info/htb/32308>

PARTNER 1 ^[6] & PARTNER 2 ^[7]

ZERO after 53,000 times – gay
and straight - no condoms

ZERO after 77,000 times - gay
men only – no condoms

[undetectable below 200 c/mL]

6. Rodgers A et al. CROI 2014 and JAMA 2016; 7. Rodgers A et al, IAS 2018



The PARTNER 2 Study

Partners of people on ART: a New Evaluation of the Risks

**HIV positive with a negative partner?
HIV negative with a positive partner?**

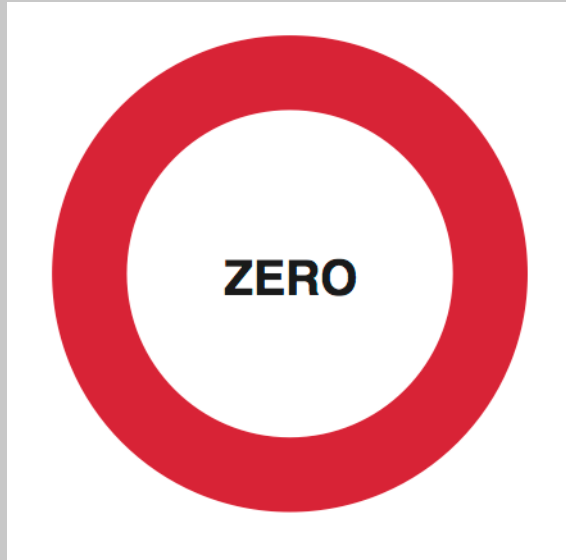
A study is looking at the impact HIV treatment has on reducing the risk of HIV transmission. While everyone wants to know these risks, there are hardly any accurate studies.

The PARTNER study is looking for couples where one partner is HIV negative and the other is HIV positive and on treatment. The study will also look at the different patterns of condom use. All information from the study will be anonymised and will be in confidence.

 **PARTNER**

www.chip.dk/partner

PARTNER studies



PARTNER 1: zero transmissions after gay and straight couples had sex more than 56,000 times ^[1]

PARTNER 2: zero transmissions after gay couples had sex more than 77,000 times ^[2]

1. Rodgers A et al. CROI 2014 and JAMA 2016; 2. Rodgers A et al, IAS 2018 and The Lancet, 2019.

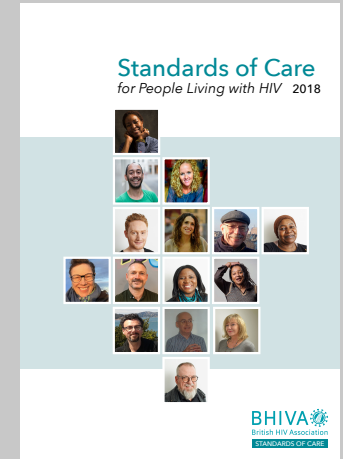
Reverse challenge

- Data now reverses the scientific challenge:
Anyone suggesting transmission is possible should now provide evidence to support this hypothesis.
- No cases 11 years after the Swiss Statement.
- No cases in >100,000 times in PARTNER.

How to communicate...

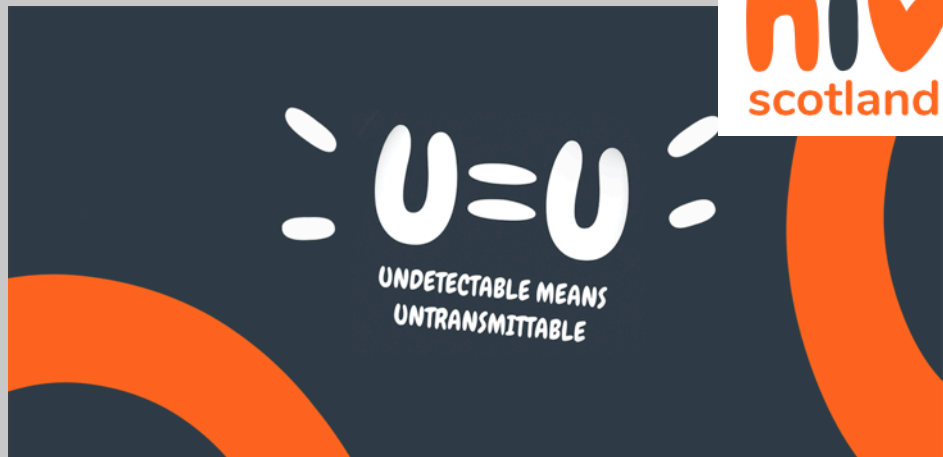


- **Community** groups for greater awareness for HIV+ and HIV– :
Prevention Access Campaign!
- **Professional** – awareness & consistency by doctors and health workers.
- Inclusion in **guidelines** and **standards**.





- HIV Scotland donation boxes with U=U screens.
- Beermats for bars.
- Led Edinburgh Pride.



THT Can't Pass It On Campaign, 2017-2019

Launched in Summer 2017 for Pride in London and used on social media.



Can't Pass It On campaign

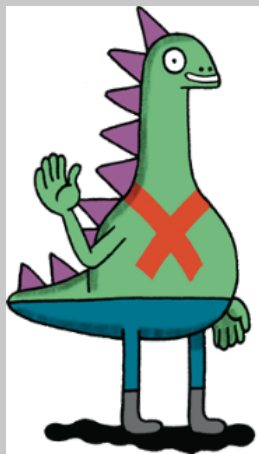


Brighton: “Making stigma history”



<https://www.themartinfisherfoundation.org>

Brighton: “Making stigma history”



<https://www.themartinfisherfoundation.org>

Posters
individualise
d for different
clinics

U=U*

UNDETECTABLE
viral load means **HIV IS**
UNTRANSMITTABLE

www.i-Base.info/u-equals-u

Angeline Namiba,
Salamander Trust

Rich Watkins,
Bloomsbury Patient Rep &
THT Health Promotion Officer

A person with sustained undetectable levels of HIV in their blood cannot transmit HIV to their sexual partners.

Ray Trevillion,
HIV i-Base

Leana Walters,
Consultant in HIV
Mortimer Market Centre,
British HIV Association (BHA)

*** Undetectable = Untransmittable**

Poster produced by HIV i-Base for Mortimer Market@CNWL (Feb 2019)

U=U*

UNDETECTABLE
viral load means **HIV IS**
UNTRANSMITTABLE

www.i-Base.info/u-equals-u

Michelle Ross,
csmQ

Angeline Namiba,
Salamander Trust

"A person with sustained undetectable levels of HIV in their blood cannot transmit HIV to their sexual partners."

Simon Collins,
HIV i-Base

Chloe Orkin,
Chair, British HIV Association (BHA)

*** Undetectable = Untransmittable**

Poster produced by HIV i-Base for Kobler@CWH (July 2018)

U=U

Undetectable = Untransmittable

Did you know that having an undetectable viral load on HIV treatment (ART) stops HIV transmission?

ART is not only good for your health – it also protects your partners if they are negative.

U=U means that you don't need to use condoms if you were only using them to stop HIV transmission.

Leading UK doctors and researchers strongly support the U=U statement.

"A person with sustained, undetectable levels of HIV in their blood cannot transmit HIV to their sexual partners."



Professor Chloe Orkin,
Chair, British HIV Association

UK guidelines state that HIV doctors should talk to all their patients about how ART stops transmission.

What is U=U?

U=U stands for:

Undetectable = Untransmittable

It means that someone with an undetectable HIV viral load on ART cannot transmit HIV, even without using condoms or PrEP.

What does U=U involve?

The protection from ART depends on:

- Taking ART to get an undetectable viral load. In the UK this means less than 50 copies/mL.
- Continuing to take your meds to keep your viral load undetectable.

How can U=U not be a risk?

This is because when viral load is undetectable in blood there is too little HIV in sexual fluids for transmission to occur.

May 2019

www.i-Base.info/u-equals-u

U=U *

**UNDETECTABLE
viral load means HIV IS
UNTRANSMITTABLE**

* Undetectable = Untransmittable

Free leaflets,
postcards, to
clinics and
online:
i-Base.info

www.i-Base.info

U=U
undetectable
viral load
=
untransmittable
HIV



Thank you

Questions?

www.i-Base.info

A vertical poster for i-base HIV treatment information service. The background is light blue with a large white pill shape in the center. The pill has an orange bottom half. Text is in white and orange. There are several small colored circles (yellow, green, pink) scattered around the pill. At the bottom is a dark blue bar with small white text.

i-base
HIV treatment
information
service

Calls are free from
land lines and most
mobile networks.
All calls are
confidential.

ASK A QUESTION
by phone, email or online
0808 800 6013
questions@i-base.org.uk
www.i-base.info

Information to be used in discussion with your doctor. Registered charity no: 1081905.