

Evidence for U=U: PARTNER studies & the prevention access campaign



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www.i-base.info



Interests to declare

No financial conflict of interest

I am community rep on PARTNER steering committee
and i-Base are signed on to U=U campaign.

Timeline and evidence

1998 vs 2008 vs 2018

- Difficult to think pre-2016
- But at BHIVA 2018, most/some doctors do not tell all/some patients...

BHIVA statement (2017)

Prof Chloe Orkin, BHIVA chair



There should be no doubt that a person with sustained, undetectable levels of HIV in their blood **CANNOT** transmit HIV to their sexual partners. ”

Personal views

- Current views – 100%? (or close)
- Translate to personal life
- Which year convinced you?
2018, 2017, 2016, 2014, 2008?

Timeline

- 1998 ART stops mother to baby transmission [1]
- 1998 US guidelines - early ART [2]
- 2000 Rakai Study (Observational) [3]
- 2008 Swiss Statement: zero risk (Evidence review) [4]
- 2011 HPTN 052: 1 vs 27 (Randomised: low risk) [5]
- 2014 PARTNER: zero/44,000 (Observational) [6]
- 2016 PARTNER published – zero/58,000 [6]
- 2016 U=U campaign
- 2017 Opposites Attract [7]

- 1. Beckerman et al. IAS, 1988
- 2. DHHS, 1998;
- 3. Quinn et al, NEJM 2000;
- 4. Vernazza et al, 2008. 5. Cohen et al NEJM 2011;
- 6. Rodgers et al. CROI 2014 and JAMA 2016;
- 7. Grulich A et al. IAS 2017.

Different types of evidence

- Observational data – large cohorts when randomised studies are not possible
- Randomised clinical trials (RCTs)
- Systematic review – comparing studies
- Case reports – small studies
- Expert opinion

Opinion vs evidence

- Expert opinion - NOT evidence

There is currently no evidence that HIV transmission occurs when viral load is undetectable.

Challenge since 2008 is whether HIV transmission can occur – so far not been proven.

In absence of evidence, having an opinion against U=U is either out-of-date or just prejudice.

References



HTB article:

“The evidence for U=U
(Undetectable = Untransmittable):
why negligible risk is zero risk”

www.i-base.info/htb/32308

Or just Google: “U=U”

1998

Beckerman et al,
IAS conference
1998, Abs 459.

Small observational
study treating HIV
positive pregnant
women with triple
therapy ART for their
own best care.

“Despite adherence problems
... the use of combination
ART ... during pregnancy
results not only in improved
maternal health, but also in
rates of transmission
that approach zero”

1998

US DHHS
guidelines
(Dec 1998)

Expert
opinion.

“Factors that would lead one to initiate early therapy include ... possibly decreasing the risk of viral transmission.”

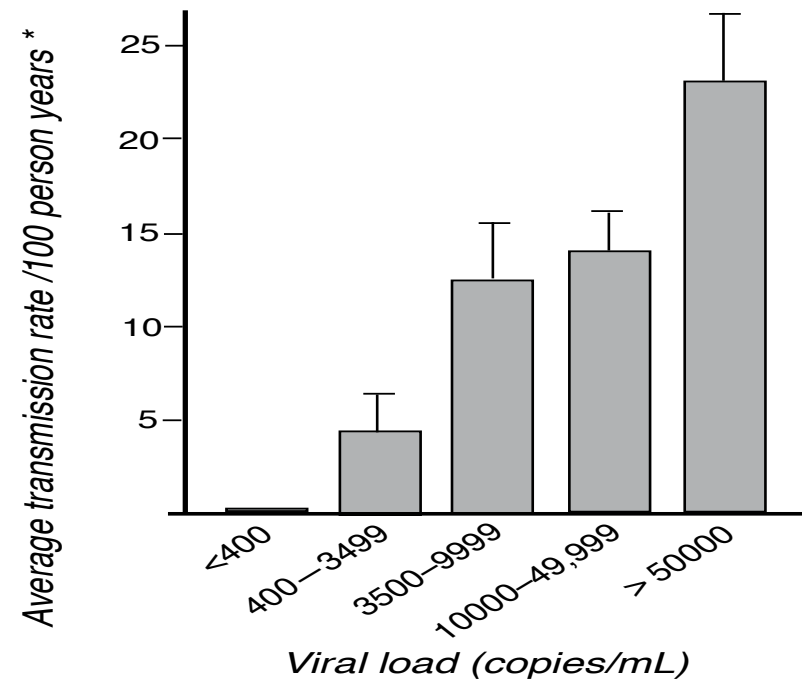
2000

Quinn et al, NEJM 2000

Rakai study:

~ 400 +ve/-ve couples
in Uganda for 30
months: no infections
when VL less than 1500
copies/mL.

Large observational study. Pre-
ART, low condom use, no STI
effect, new cases all
uncircumcised men.



2008

Swiss Statement (Vernazza et al, 2008)

Evidence review –
driven by criminalisation
in Switzerland.

Also: “We were telling
everyone to use
condoms when we had
no evidence they
needed to”.

“an HIV positive person on
effective HIV treatment (ART)
cannot transmit HIV through
sexual contact”

- on ART and adherent
- undetectable VL
- no STIs
- risk <1 in 100,000 (<0.001%)

2011

HPTN 052

(Cohen et al,
2011)

Pilot from 2005,
enrolled 2007-
2010

96%
reduction

Randomised ~ 1700 +ve/–ve
couples to early ART vs waiting.

Study stopped early – ethics.

All linked infections in couples
waiting for ART (+ single case
with detectable VL).

Durable over 4 yrs (2017).

HPTN 052: reported 2011: (enrolled 2007-2010)

1700 couples: HIV+ CD4>350

Expected ~ 200
infections: 8% vs 13%

Randomised 1:1

ART

No ART

~ 6 years follow up

HPTN 052 2011: (enrolled 2007-2010)

1700 couples: HIV+ CD4>350

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~ 4 years follow up

* Very early ART when VL was still detectable

HPTN 052 2011: (enrolled 2007-2010)

1700 HIV+ CD4>350

Expected ~ 200
infections: 8% vs 13%

Randomised 1:1

ART



N=1*

No ART



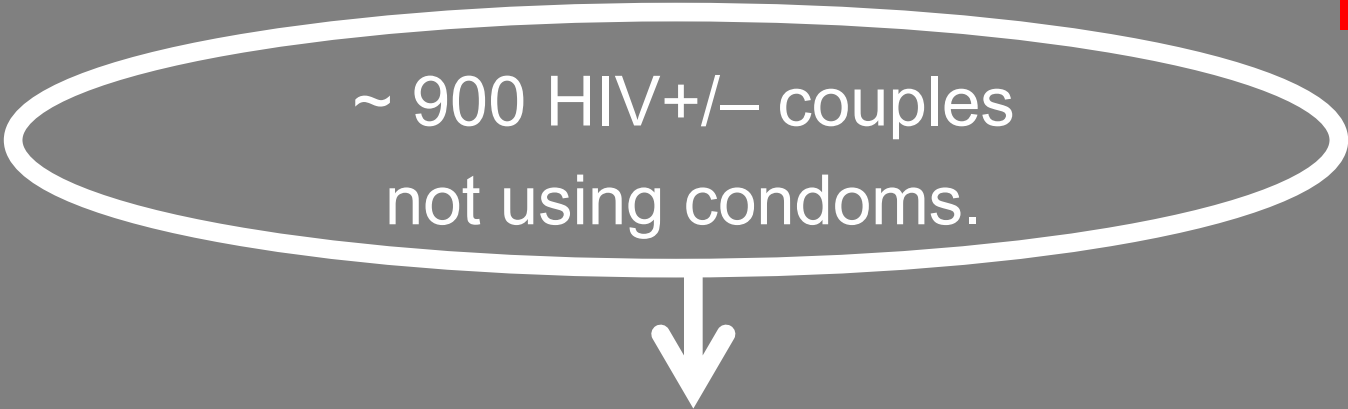
N=27

~ 4 years follow up

* Very early ART when VL was still detectable

Best evidence: PARTNER

2014
-2016



~ 900 HIV+/- couples
not using condoms.

Follow over time, collect info on risk.
After 58,000 times without condoms:
ZERO linked transmissions

Rodgers et al. CROI 2014 and IAS July 2016.

PARTNER [1, 2, 3]

2014

- ~900 couples not using condoms (1/3 gay men).
- Detailed sexual questionnaires.
- Already not using condoms (for years)
- One third were gay male couples.
- Calculated absolute real risks.
- STI were common in gay men.
- Undetectable = less than 200 copies/mL
- Protected anonymity

1. Rodgers et al. CROI Feb 2014; 2. IAS July 2016; 3. JAMA accepted Feb 2016, published July 2016.

PARTNER - UK sites

2010-
2018

UK sites

Birmingham: Birmingham Heartlands Hospital

Brighton: Lawson Unit, Royal Sussex Country Hospital

Bristol: Southmead Hospital

Cardiff: Cardiff Royal Infirmary

Coventry: Coventry and Warwickshire Hospital

Edinburgh: Western General Hospital

Leicester: Leicester Royal Infirmary

Manchester: North Manchester Hospital

London centres

Royal Free Hospital

St. Stephens Centre/Kobler clinic

Royal London Hospital

Homerton Hospital

North Middlesex Hospital

King's College Hospital

St. Thomas Hospital


Mortimer Market Centre

St. Mary's Hospital

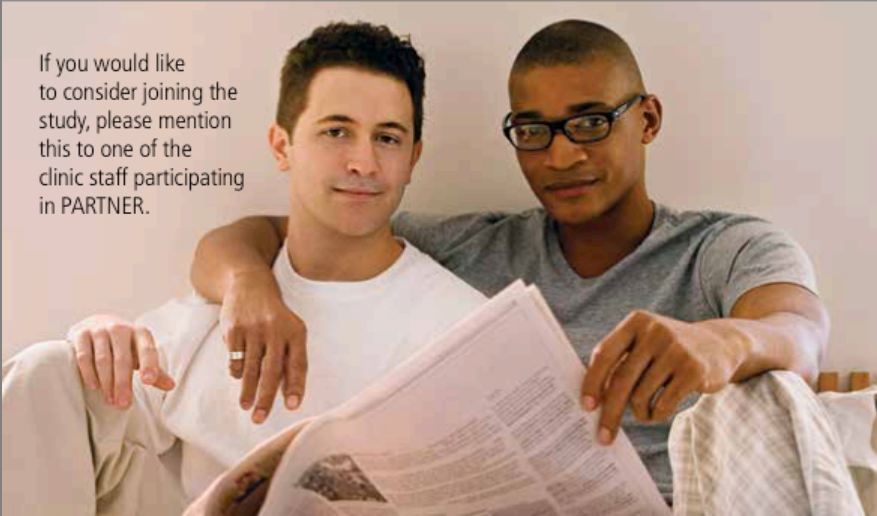
PARTNER

2014

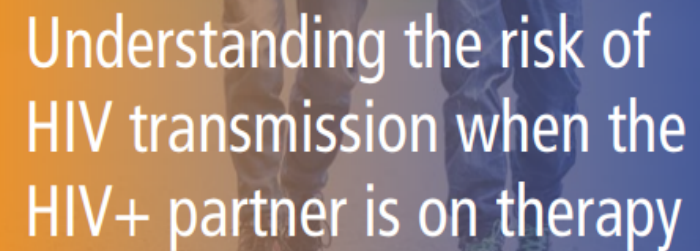
- Intensive involvement of nurses (Tina Braun, CHIP)
- Recruiting and retaining couples depended on close connections with researchers.
- Enrolment slower than predicted, but steady.
- Sometimes driven by one rather than both partners
- Often difficult if relationships were short-term
- High participant interest in outcome
- High community involvement throughout

A photograph of two men walking outdoors in a park-like setting. The man on the left is wearing a black jacket over an orange shirt and blue jeans. The man on the right is wearing a grey and black plaid jacket over a blue shirt and blue jeans. They are both smiling and looking at each other.

The PARTNER 2 Study: a study for sero-different gay couples

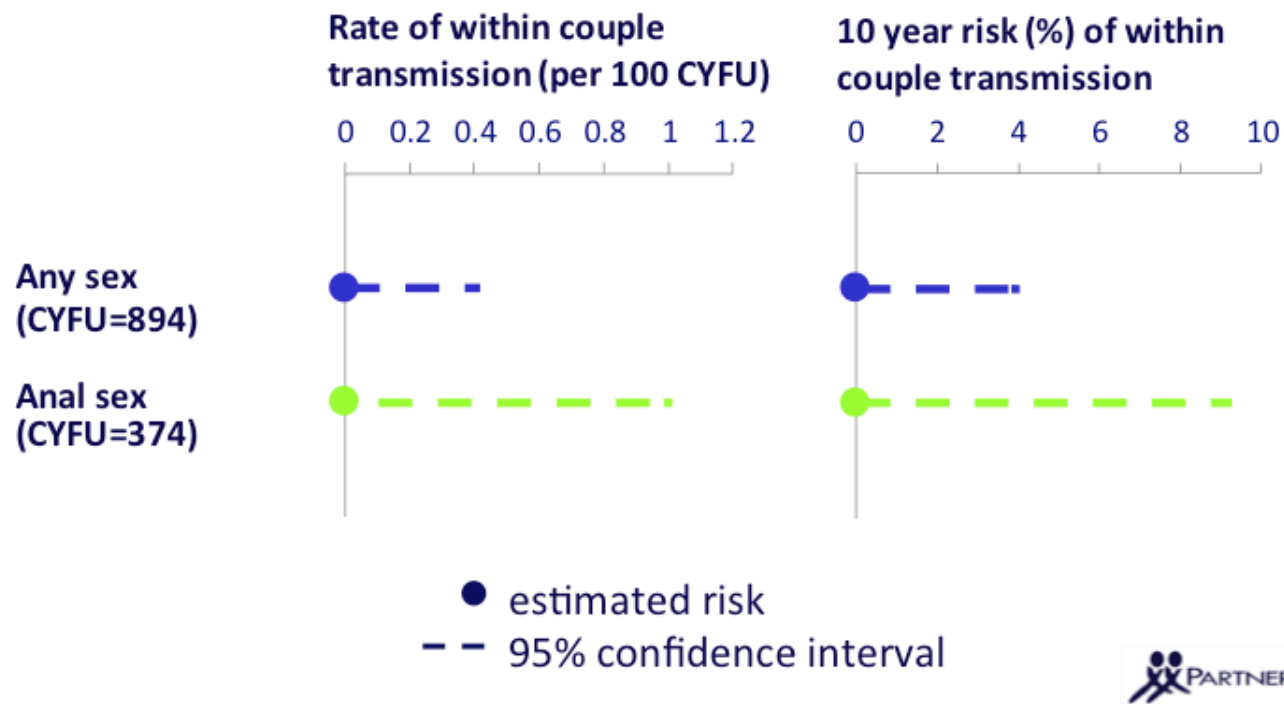
A photograph of two men sitting together and reading a newspaper. The man on the left is wearing a white t-shirt and has his arm around the man on the right. The man on the right is wearing a grey t-shirt and glasses. They are both looking at the newspaper.

If you would like
to consider joining the
study, please mention
this to one of the
clinic staff participating
in PARTNER.

A photograph of two men walking towards the camera. The man on the left is wearing a white t-shirt and blue jeans. The man on the right is wearing a grey t-shirt and blue jeans. They are both looking at the camera.

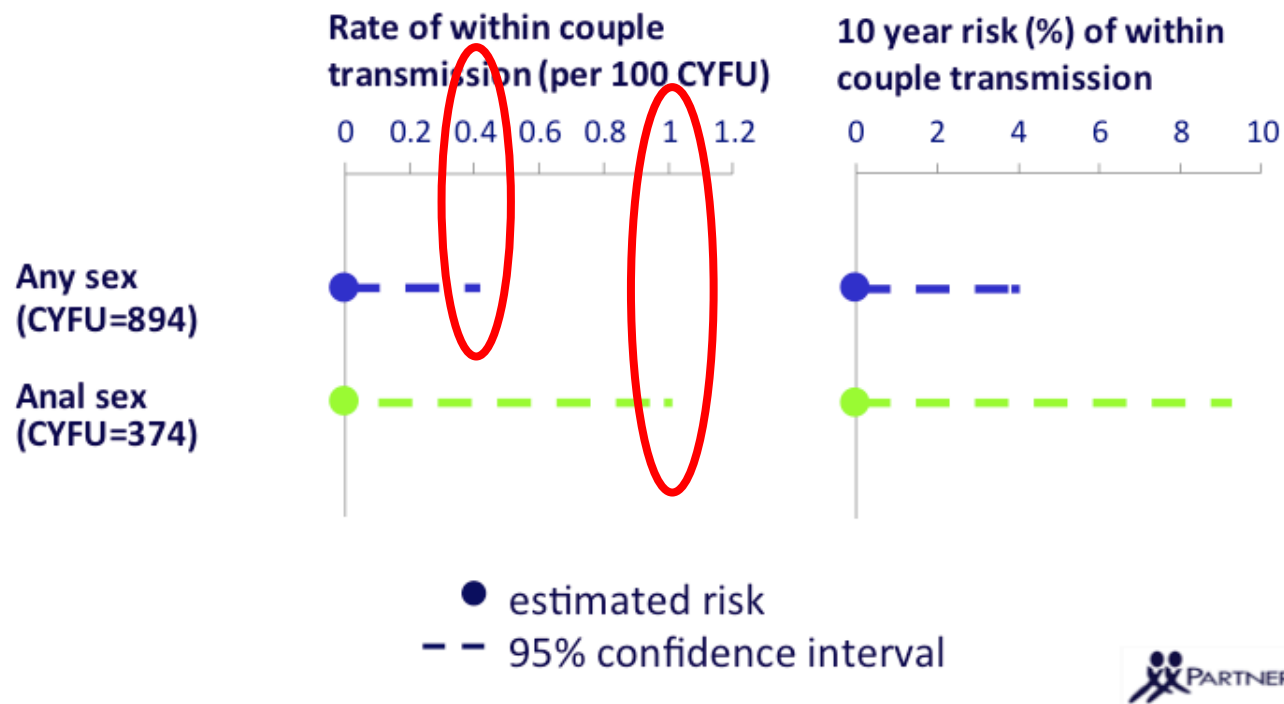
Understanding the risk of HIV transmission when the HIV+ partner is on therapy

Rate of HIV transmission according to sexual behaviour reported by the negative partner



Rodgers et al.
CROI Feb
2014

Rate of HIV transmission according to sexual behaviour reported by the negative partner



Rodgers et al.
CROI Feb
2014

PARTNER timeline

2016

2009 Protocol, funding and planning - Rate 0.5/100 CYFU

2010 Sep – first enrolled participants

2014 Feb - Preliminary results at CROI

2014 March – Launch of PARTNER 2

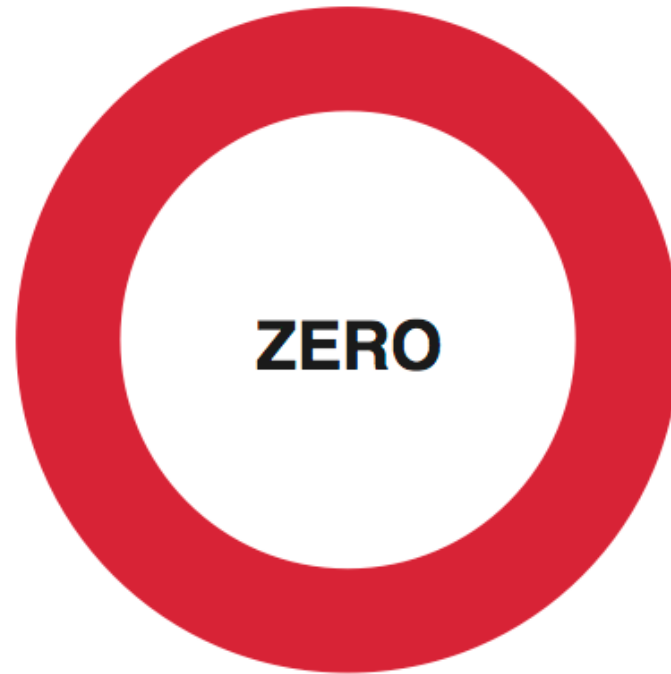
2014 May – Final data collection

2014-15 Paper rejected by several journals, JAMA accept but take 18 months to publish with repeated analyses.

2016 Apr – JAMA accept – then delay to IAS (July)

2018 – PARTNER 2 results

Zero HIV transmissions in the PARTNER study



i-Base: >35,000 facebook views in first week

2016

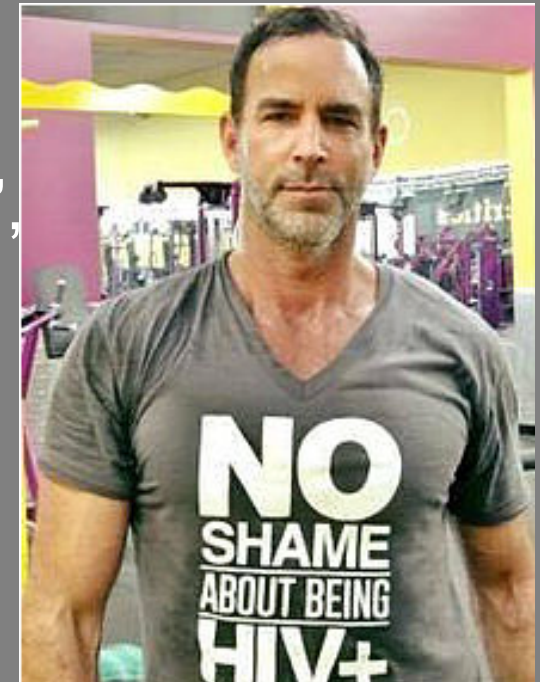
Prevention Access Campaign

Launched in July 2016 by Bruce Richman and other researchers and activists.

Driven by problems with “96% reduced risk”, use of “reduced”, “negligible” but not 0.

Pressure for scientist to shift focus from minimal (if any) risk.

Mainstream campaign – IAS, BHIVA, US CDC: EFFECTIVELY ZERO = ZERO






*Karim,
prof de danse*

*Les séropositifs sous traitement
ont beaucoup de choses
à nous transmettre.
Mais pas le virus du sida.*




ACT UP
DUBLIN

**PEOPLE WITH HIV ON EFFECTIVE
TREATMENT DO NOT SEXUALLY
TRANSMIT HIV**

UNDETECTABLE = UNTRANSMITTABLE

www.preventionaccess.org

International AIDS Society

U=U

UNDETECTABLE
=
UNTRANSMITTABLE



A PERSON LIVING WITH HIV
WHO HAS AN UNDETECTABLE
VIRAL LOAD DOES NOT
TRANSMIT THE VIRUS TO THEIR
PARTNERS.

The International AIDS Society is proud to endorse the U=U consensus statement of the Prevention Access Campaign.

www.preventionaccess.org



nycHealthy 
@nycHealthy

If your viral load is undetectable, it means you can't pass HIV to others. Treatment = Prevention! on.nyc.gov/staysure #PlaySure #TasP



HIV treatments can make the virus undetectable, meaning it cannot be passed on

#TestWeekScot

www.preventionaccess.org

2016

U=U Statement

Since 2016 more than 670 organisations signed the U=U statement.

From more than 60 countries

Statement update in Jan 2018:
EFFECTIVELY ZERO = ZERO

Challenge: is transmission is possible?





www.preventionaccess.org



Se o preconceito é uma doença, a informação é a cura.

I = I

Indetectável = Intransmissível

Cientistas declaram: pessoas que vivem com HIV, estão em tratamento regular e têm carga viral indetectável há mais de 6 meses não transmitem o vírus sexualmente.

Para maiores informações acesse o site: giv.org.br

www.preventionaccess.org

K = K

KHÔNG PHÁT HIỆN
=
KHÔNG LÂY TRUYỀN

"Bằng chứng khoa học là rõ ràng. Một người có tải lượng virus không phát hiện được trong máu của họ không có nguy cơ lây nhiễm cho bạn tình của họ."

- Bản tuyên bố của NAM
aidsmap (Tháng Hai năm 2017)

www.preventionaccess.org

2018

A=A

Ain't no viral load...
Ain't no risk of HIV

PARTNER 2 timeline

2018

2014 March – launch PARTNER 2

~900 gay couples only

- March 2014 to May 2018
- Provide similar level of confidence for gay men
Even though actual risk is believed to be zero

2018 May – Final data collection

2018 – PARTNER 2 results at IAS 2018

Personal views

- How important is PARTNER 2?
- Any changed views during today
- Increased confidence to talking about U=U?

Conclusions

- Zero transmissions without condoms when VL undetectable in all studies.
- No published cases in ten years.
- U=U based on of upper range of acceptable risk
- Still not talked about by all health workers to all HIV positive patients
- PARTNER 2 results due July 2018.

Thanks:

Tina Braun

Roy Trevelion

Michelle Ross

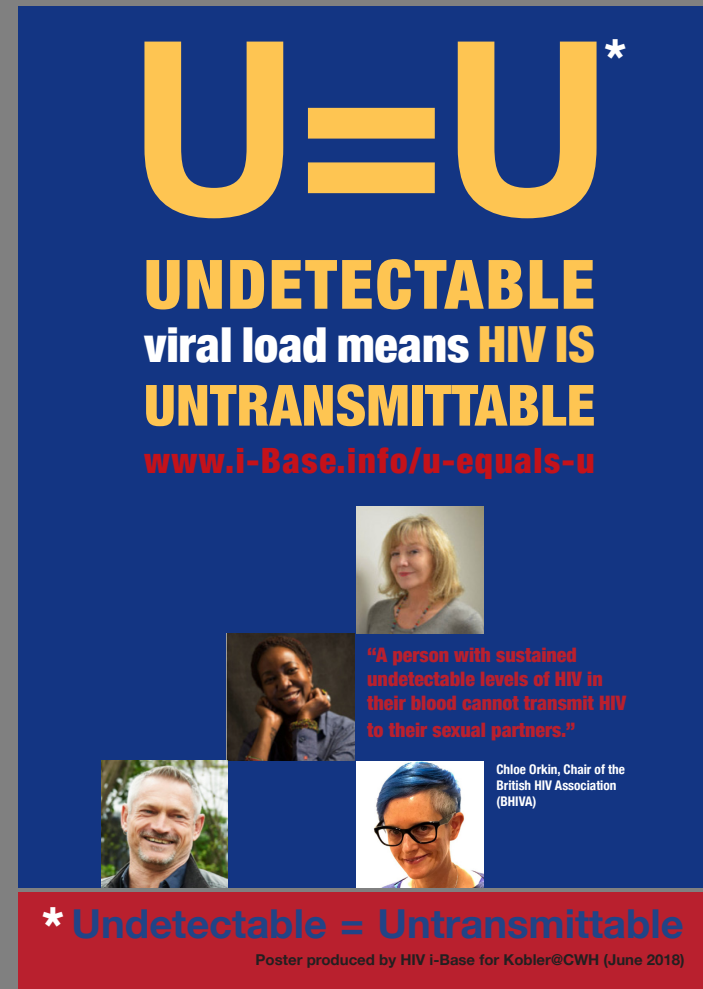
Angelina Namiba

Garry Brough

Prof Chloe Orkin

PARTNER study

Questions?



The poster features a blue background with the text 'U=U*' in large yellow letters at the top. Below this, it reads 'UNDETECTABLE viral load means HIV IS UNTRANSMITTABLE' in yellow and white. A red URL 'www.i-Base.info/u-equals-u' is provided. The poster includes four small portraits of individuals: a woman with blonde hair, a man with dark hair, a man with grey hair, and a woman with short blue hair. A quote in red text states: 'A person with sustained undetectable levels of HIV in their blood cannot transmit HIV to their sexual partners.' Below the portraits, it identifies 'Chloe Orkin, Chair of the British HIV Association (BHIVA)'. At the bottom, a red banner contains the text '* Undetectable = Untransmittable' and 'Poster produced by HIV i-Base for Kobler@CWH (June 2018)'.

U=U*

UNDETECTABLE
viral load means **HIV IS**
UNTRANSMITTABLE

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

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

Chloe Orkin, Chair of the British HIV Association (BHIVA)

*** Undetectable = Untransmittable**

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

Additional slides

Transmission....

What does it mean to be undetectable?

- Your health now ?
- Your health in the future ?
- Partners and relationships ?
- Stigma and discrimination ?
- Legal issues?

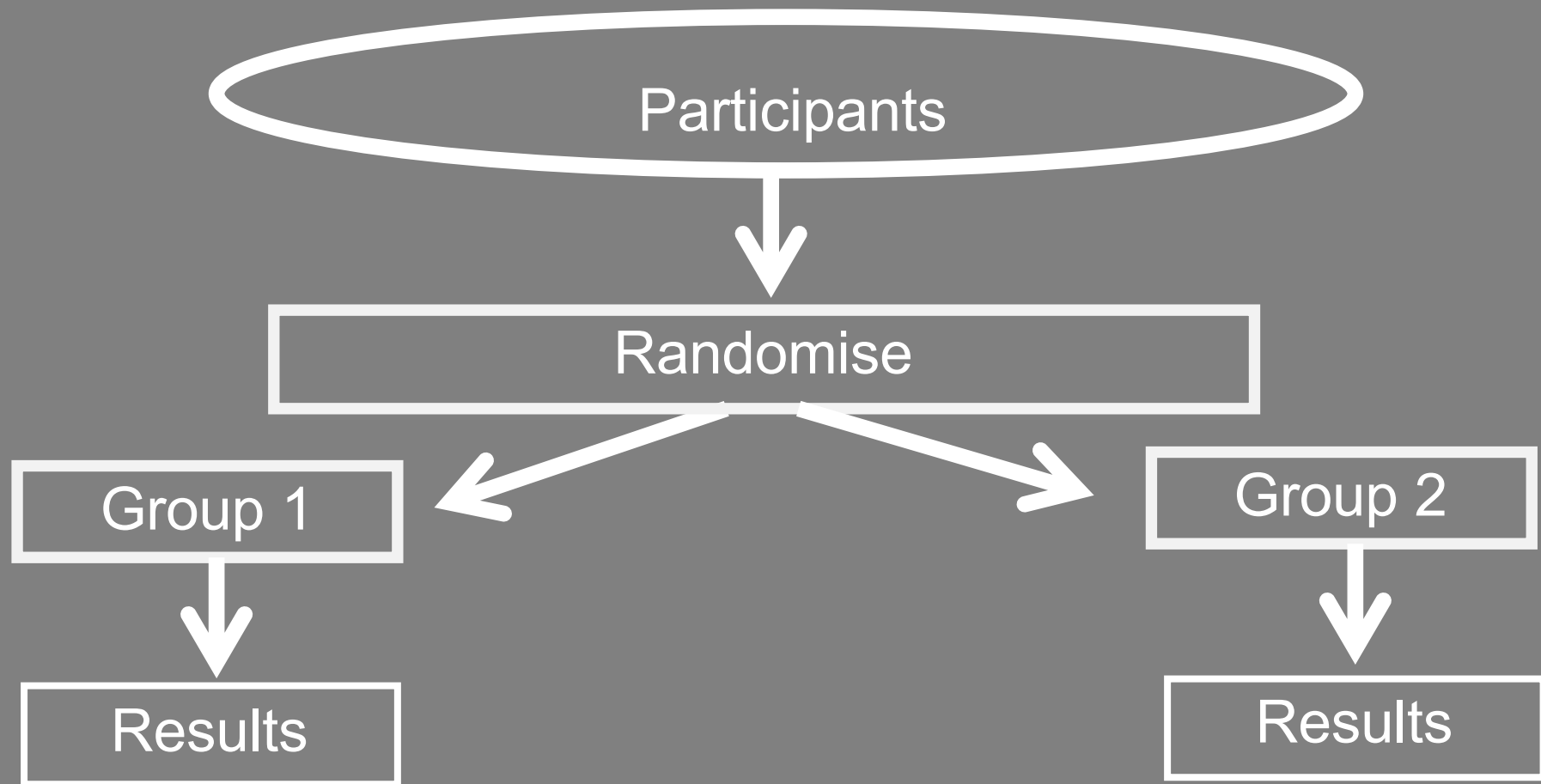
Questions?

U=U

Has your doctor talked to
you about U=U?

undetectable viral load = untransmittable HIV

Randomised studies = "Gold standard evidence"



HPTN 052 2011: (enrolled 2007-2010)

1700 HIV+ CD4>350

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