How to manage viral blip discussions

MARK FISHER

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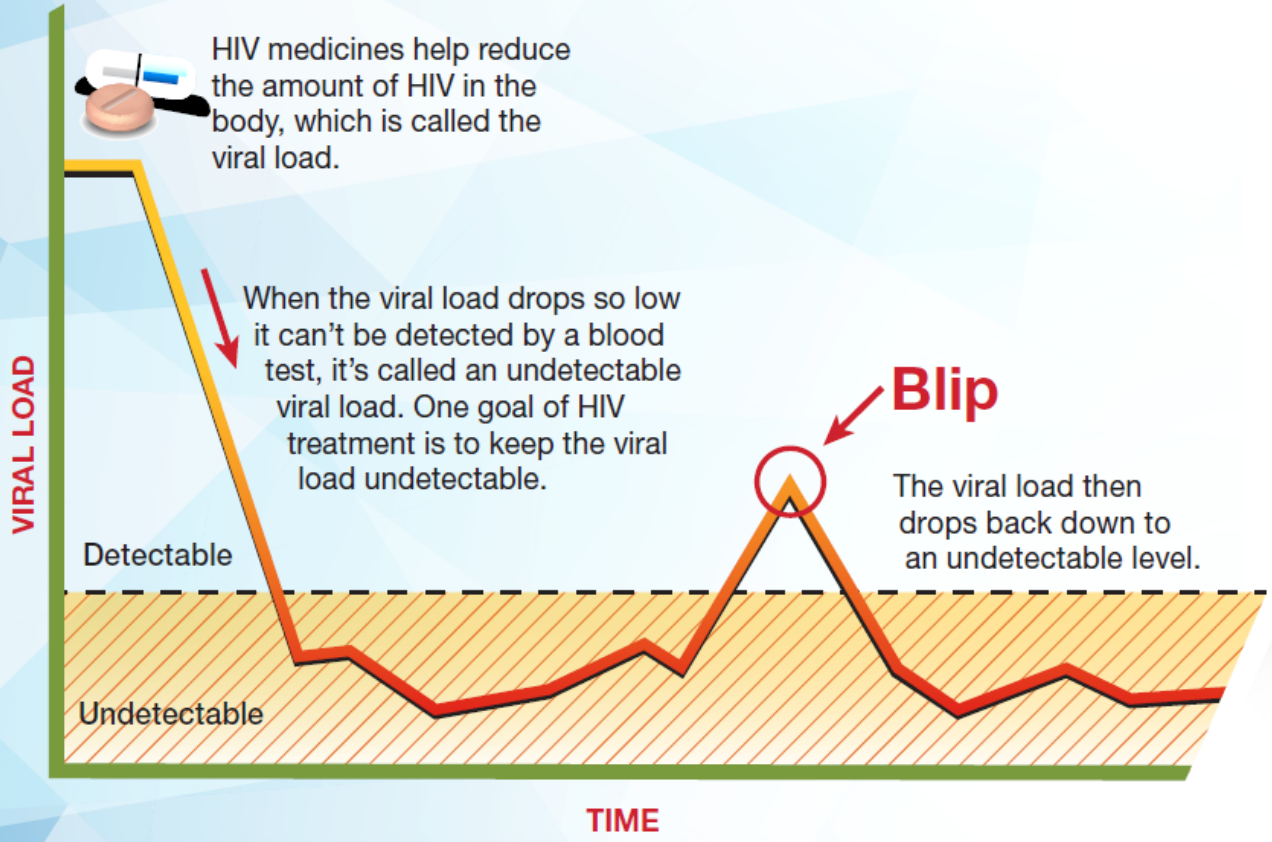
WHAT'S A BLIP?

A **blip** is when the viral load temporarily rises to a detectable level.



If you have questions about blips, talk to your health care provider.

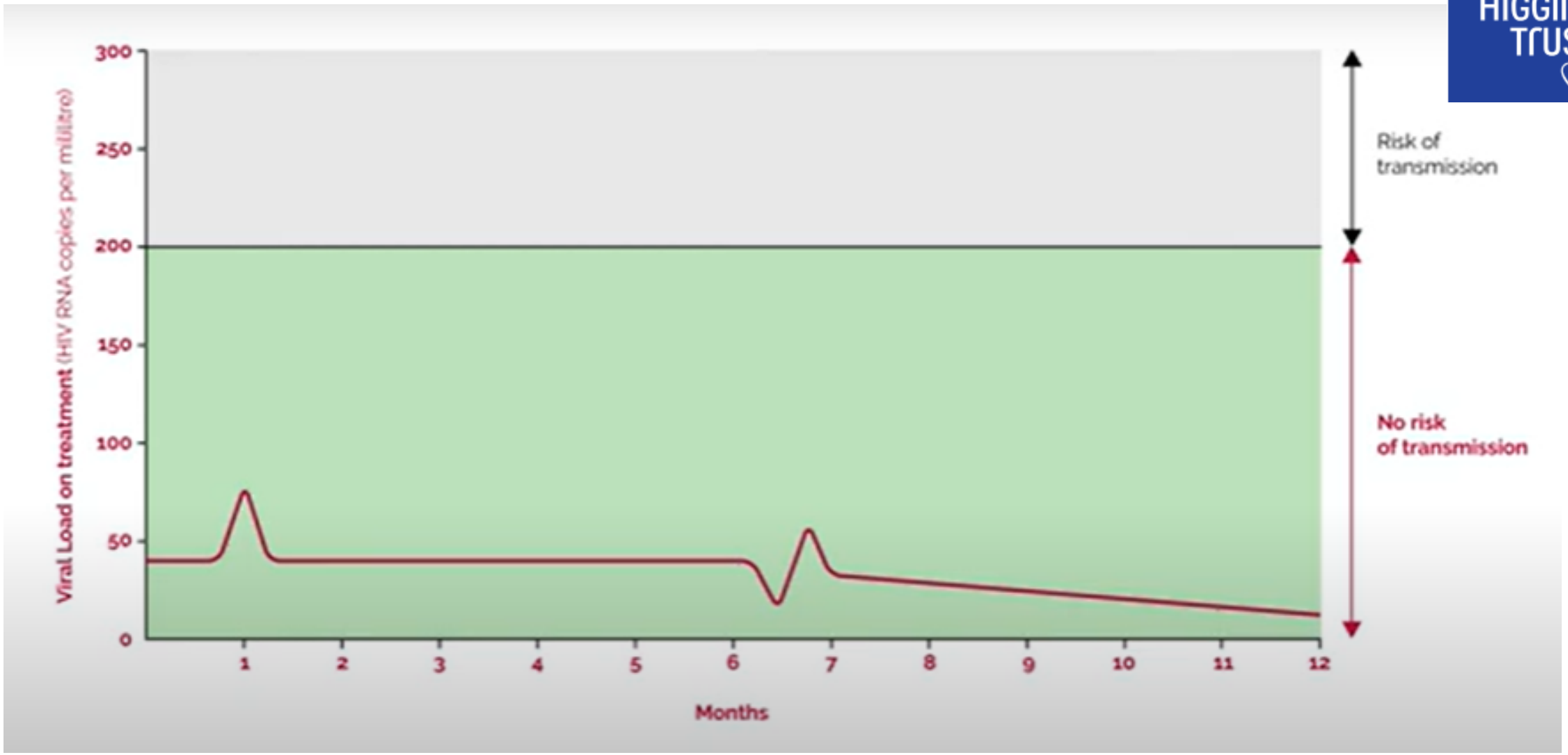
Frequent blips can be a sign of trouble. But occasional blips can happen to anyone with HIV. **An occasional blip doesn't mean that your HIV treatment is failing.**

Blips can happen when your immune system is under stress, for example, when you're sick.

Skipping doses of HIV medicines can also cause blips. Taking your medicines every day can help prevent blips. Keeping your viral load under control is key to a longer, healthier life with HIV.

For more information, visit HIVinfo.NIH.gov.

HIVinfo.NIH.gov


Terrence Higgins Trust
Viral Load on treatment (HIV RNA copies per millilitre)
300
250
200
150
100
50
0
1
2
3
4
5
6
7
8
9
10
11
12
Months
Risk of transmission
No risk of transmission

THE ROLE OF HIV VIRAL SUPPRESSION IN IMPROVING INDIVIDUAL HEALTH AND REDUCING TRANSMISSION

POLICY BRIEF

22 July 2023

World Health Organization

The risk of sexual transmission of HIV in individuals with low-level HIV viraemia: a systematic review

Laura N Broyles, Robert Luo, Debi Boeras, Lara Vojnov

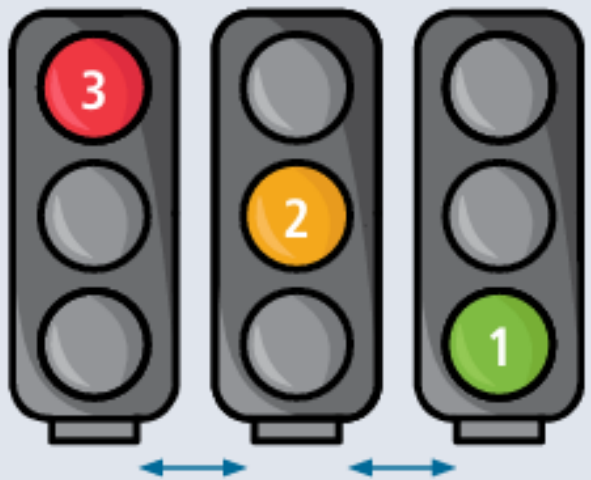
Summary

Background The risk of sexual transmission of HIV from individuals with low-level HIV viraemia receiving antiretroviral therapy (ART) has important public health implications, especially in resource-limited settings that use alternatives to plasma-based viral load testing. This Article summarises the evidence related to sexual transmission of HIV at varying HIV viral load levels to inform messaging for people living with HIV, their partners, their health-care providers, and the wider public.

Findings 244 studies were identified and eight were included in the analysis, comprising 7762 serodiscordant couples across 25 countries. The certainty of evidence was moderate; the risk of bias was low. Three studies showed no HIV transmission when the partner living with HIV had a viral load less than 200 copies per mL. Across the remaining four prospective studies, there were 323 transmission events; none were in patients considered stably suppressed on ART. Among all studies there were two cases of transmission when the index patient's (ie, patient with previously diagnosed HIV infection) most recent viral load was less than 1000 copies per mL. However, interpretation of both cases was complicated by long intervals (ie, 50 days and 53 days) between the transmission date and the most recent index viral load result.

Interpretation There is almost zero risk of sexual transmission of HIV with viral loads of less than 1000 copies per mL. These data provide a powerful opportunity to destigmatise HIV and promote adherence to ART through dissemination of this positive public health message. These findings can also promote access to viral load testing in resource-limited settings for all people living with HIV by facilitating uptake of alternative sample types and technologies.

Funding Bill & Melinda Gates Foundation.



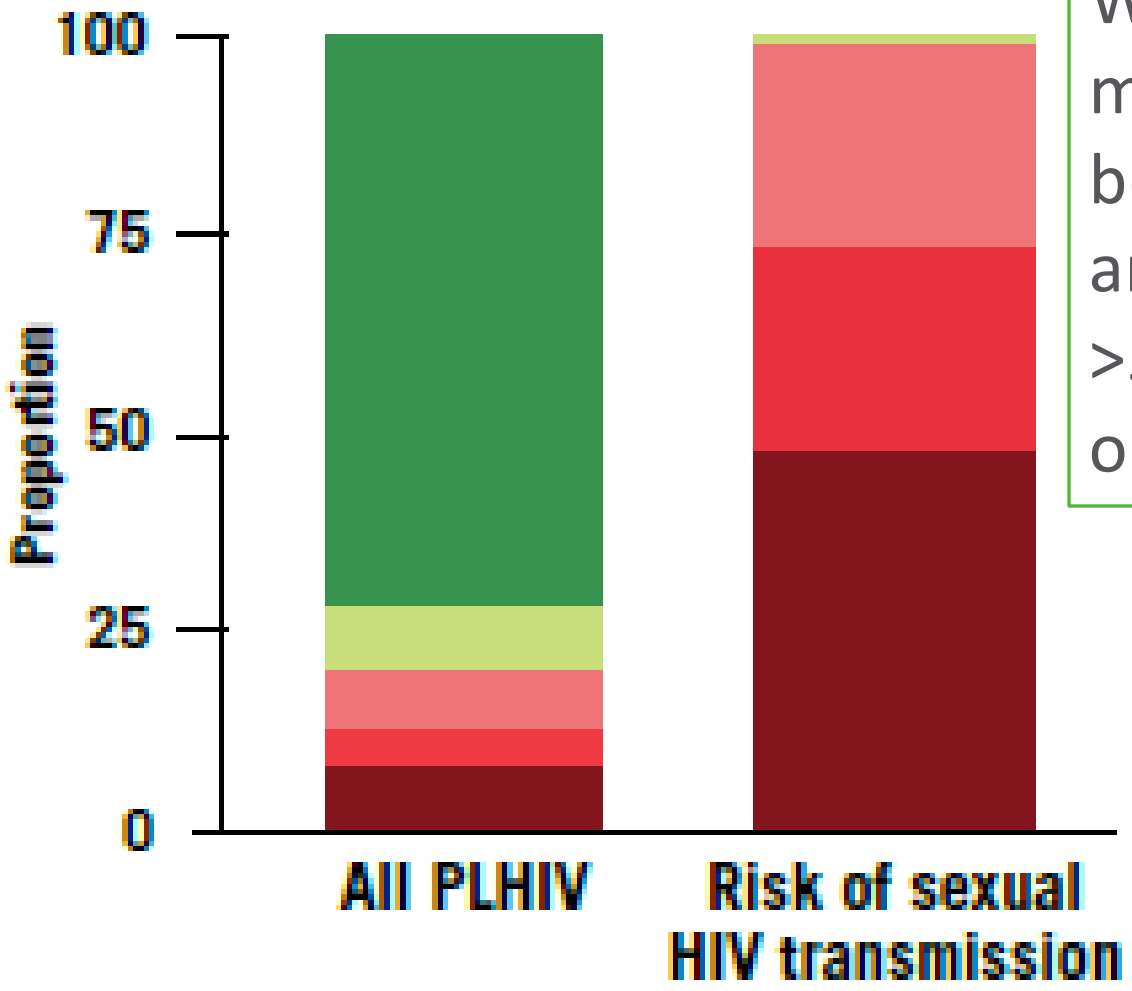
1 **Undetectable (not detected*):** no measurable virus. Zero risk of transmission to sexual partner(s); minimal risk of mother to child transmission.

2 **Suppressed (detected but ≤1000 copies/mL):** some virus replicating and present: could be due to missing doses, recent treatment initiation or drug resistance. Almost zero or negligible risk of transmission to sexual partner(s).

3 **Unsuppressed (>1000 copies/mL):** significant virus replicating and present: could be due to missing doses, recent treatment initiation or drug resistance. Increased risk of falling ill and/or passing virus on to sexual partner(s) or children.

The ultimate goal for all people living with HIV is to reach and sustain undetectable viral loads. Taking antiretroviral therapy as prescribed will support this goal, prevent transmission to their sexual partner(s) and/or children, and improve their own clinical well-being.

* Not detected by the test or sample type used.



Without antiretroviral therapy, median viral load values tend to be considerable:
anywhere from 30 000 to >500,000 copies/ mL, depending on the stage of infection

HIV RNA Assay	VL Lower Limit of Detection, Copies/mL	Results Reported for Low VL Values
Roche COBAS AmpliPrep/COBAS TaqMan HIV-1 Test, version 2.0[a]	20	"HIV-1 RNA not detected" "HIV-1 RNA detected, <20 HIV-1 RNA copies/mL"
bioMérieux NucliSENS EasyQ HIV-1 v2.0[b]	10	"Target not detected" "<10 copies/mL"
Abbott RealTime HIV-1 Viral Load Assay[b]	40	"Not detected" "<40 copies/mL"
Hologic Aptima HIV-1 Quant Dx Assay[c]	30	"Not detected" "<30 detected"

200 copies /ml

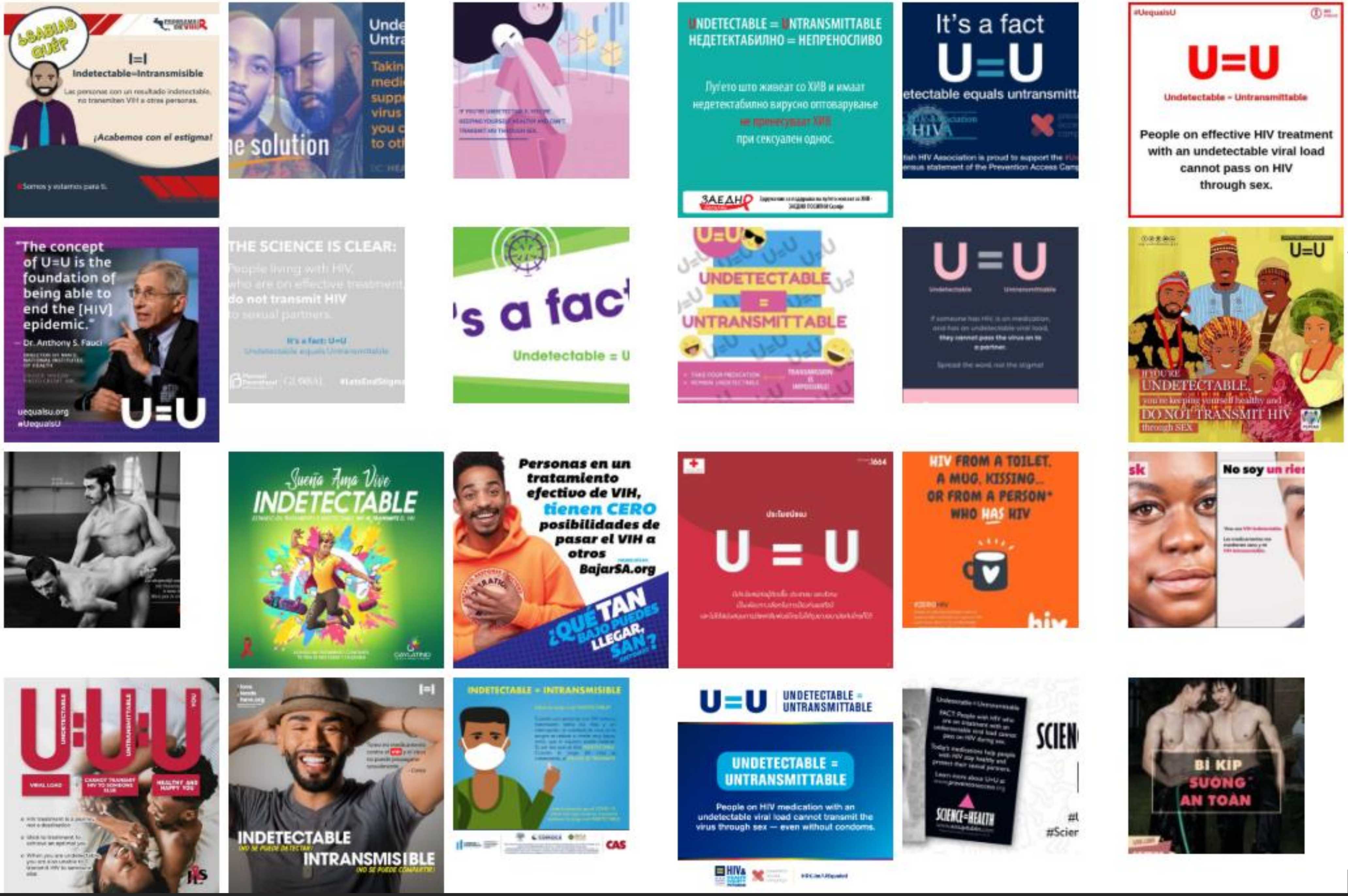
Undetectable

90 80 70 60

100 <LOD <LLOQ 50

10 20 30 40


U=U
HIV Positive
Undetectable
Uninfectious
[+u]
U=U
Positive
Undetectable
Uninfectious
U=U
HIV Positive
Undetectable
Uninfectious
SUSAN BLICK
PHOTOGRAPHY


¿SABIAS QUÉ?
I=I
Indetectable=Intransmisible
¡Acabemos con el estigma!
UNDETECTABLE = UNTRANSMITTABLE
НЕДЕТЕКТАБИЛНО = НЕПРЕНОСЛИВО
It's a fact
U=U
#UequalsU
U=U
Undetectable = Untransmittable
People on effective HIV treatment
with an undetectable viral load
cannot pass on HIV
through sex.
"The concept
of U=U is the
foundation of
being able to
end the [HIV]
epidemic."
– Dr. Anthony S. Fauci
uequalsu.org
#UequalsU
U=U
THE SCIENCE IS CLEAR:
Undetectable = U
UNDETECTABLE
=
UNTRANSMITTABLE
U=U
IF YOU'RE
UNDETECTABLE,
DO NOT TRANSMIT HIV
through SEX
Sueña Ama Vive
INDETECTABLE
Personas en un
tratamiento
efectivo de VIH,
tienen CERO
posibilidades de
pasar el VIH a
otros
BajarSA.org
¿QUÉ TAN
BAJO PUEDES
LLEGAR,
SAN?
U = U
HIV FROM A TOILET,
A MUG, KISSING...
OR FROM A PERSON*
WHO HAS HIV
No soy un ries
U=U=U
I=I
INDETECTABLE
INTRANSMISIBLE
INDETECTABLE = INTRANSMISIBLE
U=U
UNDETECTABLE =
UNTRANSMITTABLE
People on HIV medication with an
undetectable viral load cannot transmit the
virus through sex — even without condoms.
BÍ KÍP
SUÔNG
AN TOÀN

When U=U isn't so simple: How viral blips can affect your viral load

So, you can imagine
it came as quite a shock
when I had a phone call from my doctor
who informed me that my viral load
was no longer undetectable.

Burnett Foundation Aotearoa

aidsmap

Undetectable viral load & treatment as prevention

Giving a figure for HIV viral load below 200 is a "harmful medical practice"

Roger Pebody | 2 January 2024 | Estimated reading time 4 minutes

JOURNAL ARTICLE EDITOR'S CHOICE

The Perils of Overly Sensitive Viral Load Testing for Persons With Human Immunodeficiency Virus

Maria G Rodriguez , Alina Syros , Allan E Rodriguez , David P Serota ✉ Author Notes

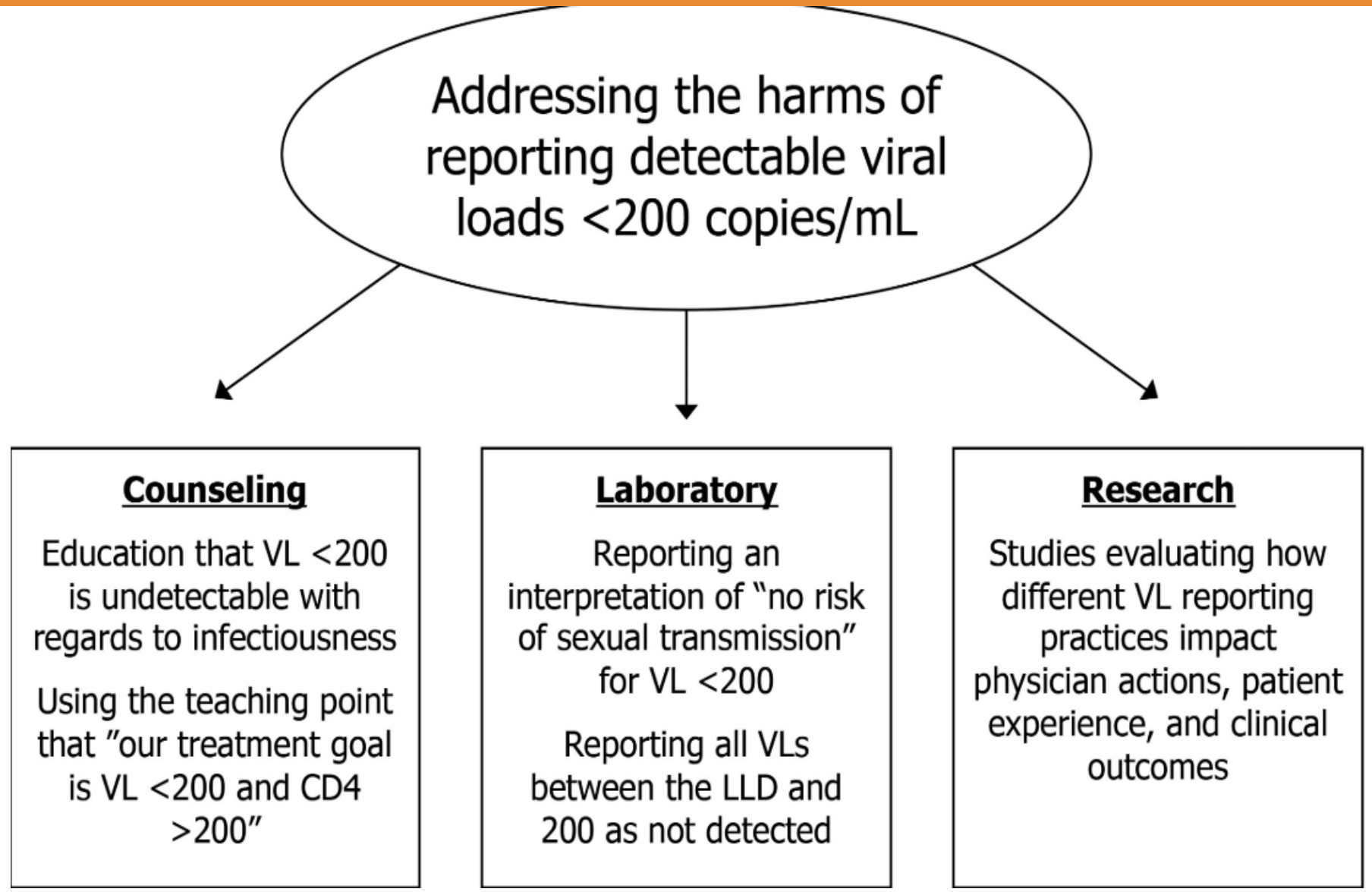
Open Forum Infectious Diseases, Volume 10, Issue 10, October 2023, ofad494,
https://doi.org/10.1093/ofid/ofad494
Published: 03 October 2023 **Article history** ▾

Health New Zealand | Te Whatu Ora

26 March 2024

Health New Zealand
Te Whatu Ora

DHA | TE RŌPŪ HAUORA MATIHIKO
Digital Health Association


Addressing the harms of reporting detectable viral loads <200 copies/mL
Counseling
Education that VL <200 is undetectable with regards to infectiousness
Using the teaching point that "our treatment goal is VL <200 and CD4 >200"
Laboratory
Reporting an interpretation of "no risk of sexual transmission" for VL <200
Reporting all VLs between the LLD and 200 as not detected
Research
Studies evaluating how different VL reporting practices impact physician actions, patient experience, and clinical outcomes

ign of trouble. But
en to anyone with HIV.
n't mean that your HIV

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system is under stress,
ple, when you're sick.

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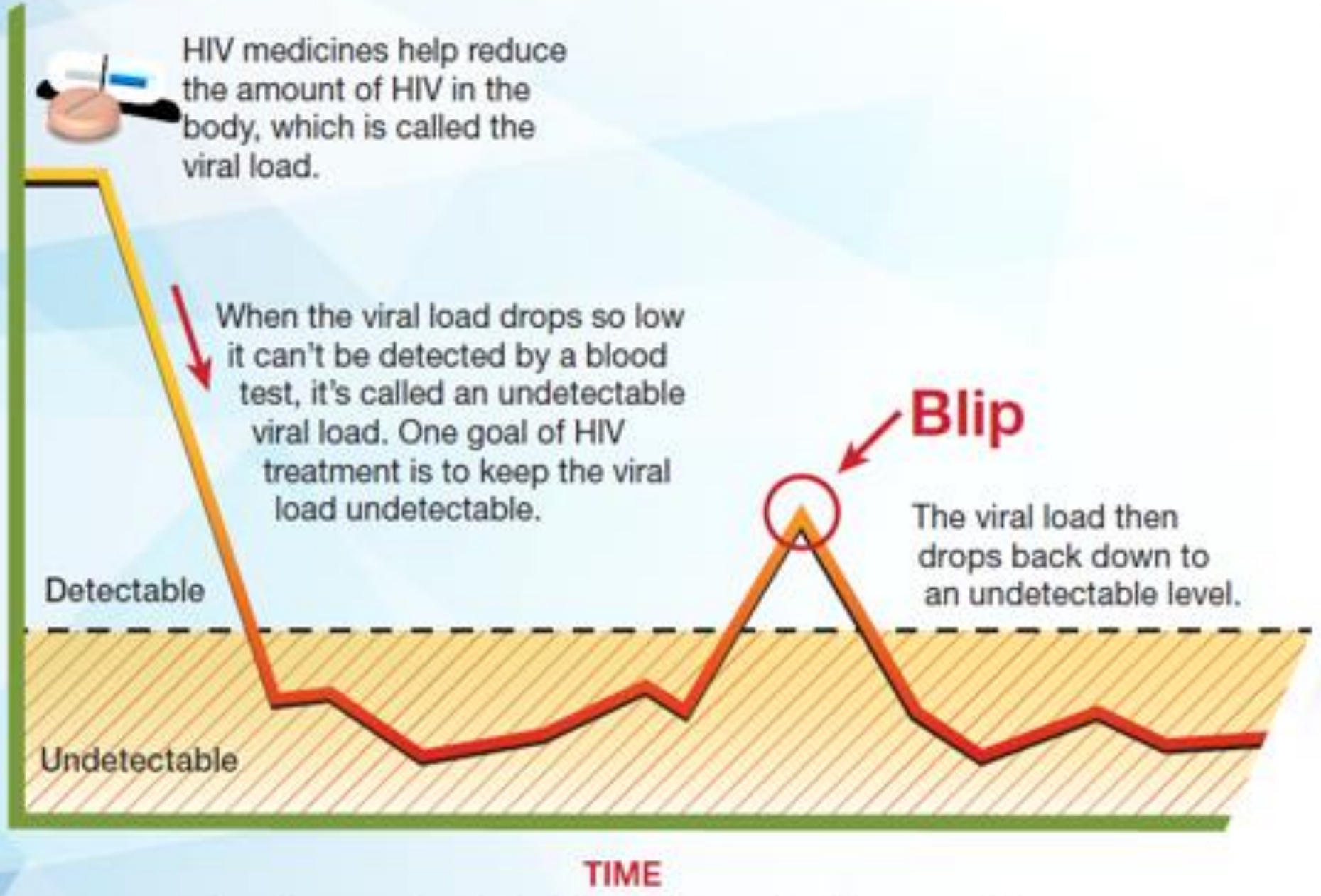
r, healthier life with HIV.

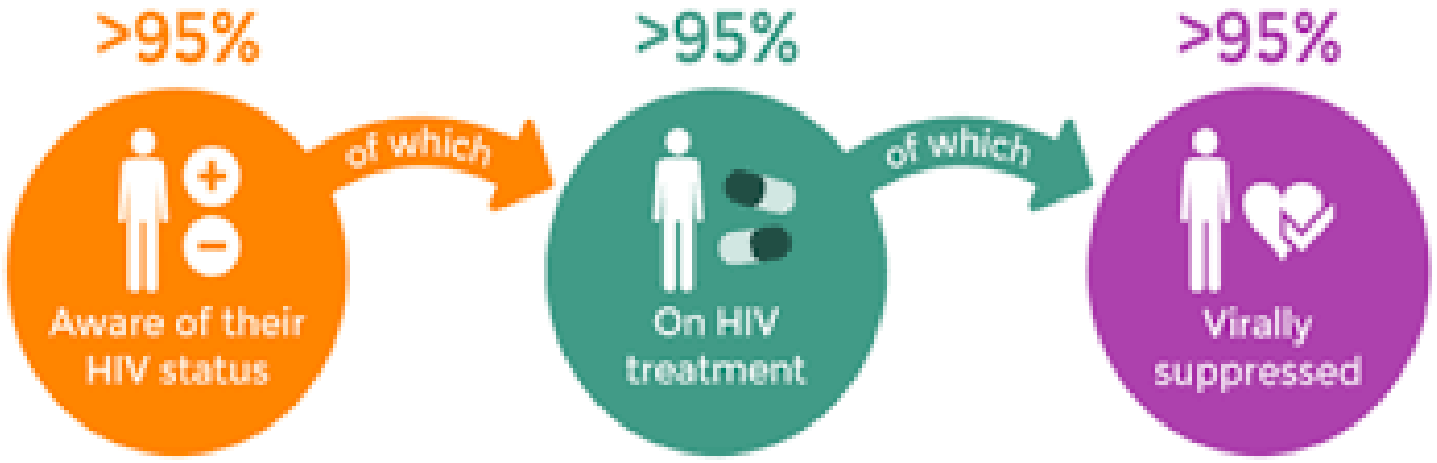


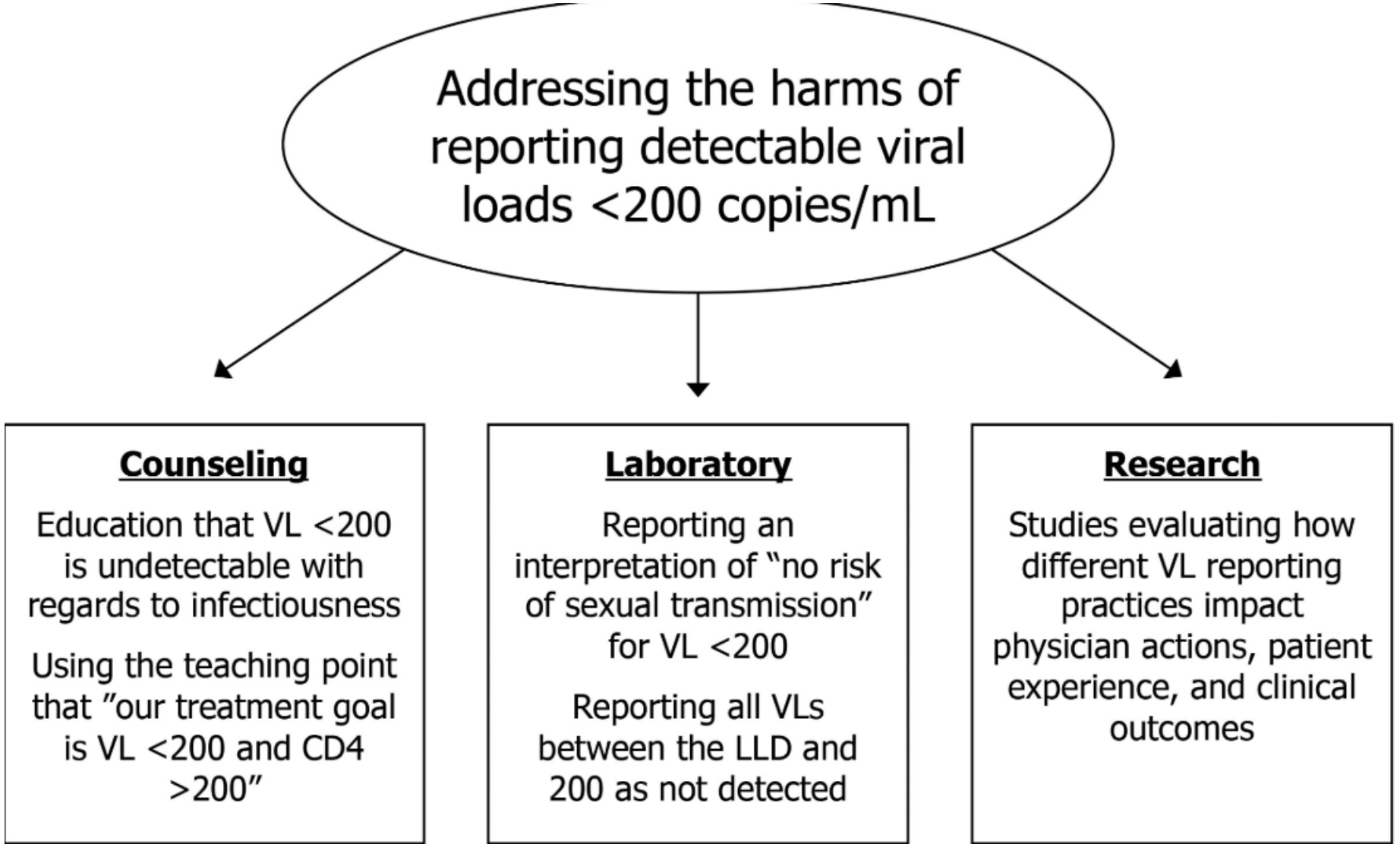
If you have questions about blips, talk to your health care provider.

Suppressed but detectable

2 Suppressed (detected but ≤1000 copies/mL):

Almost Zero, or negligible risk of transmission to sexual partners

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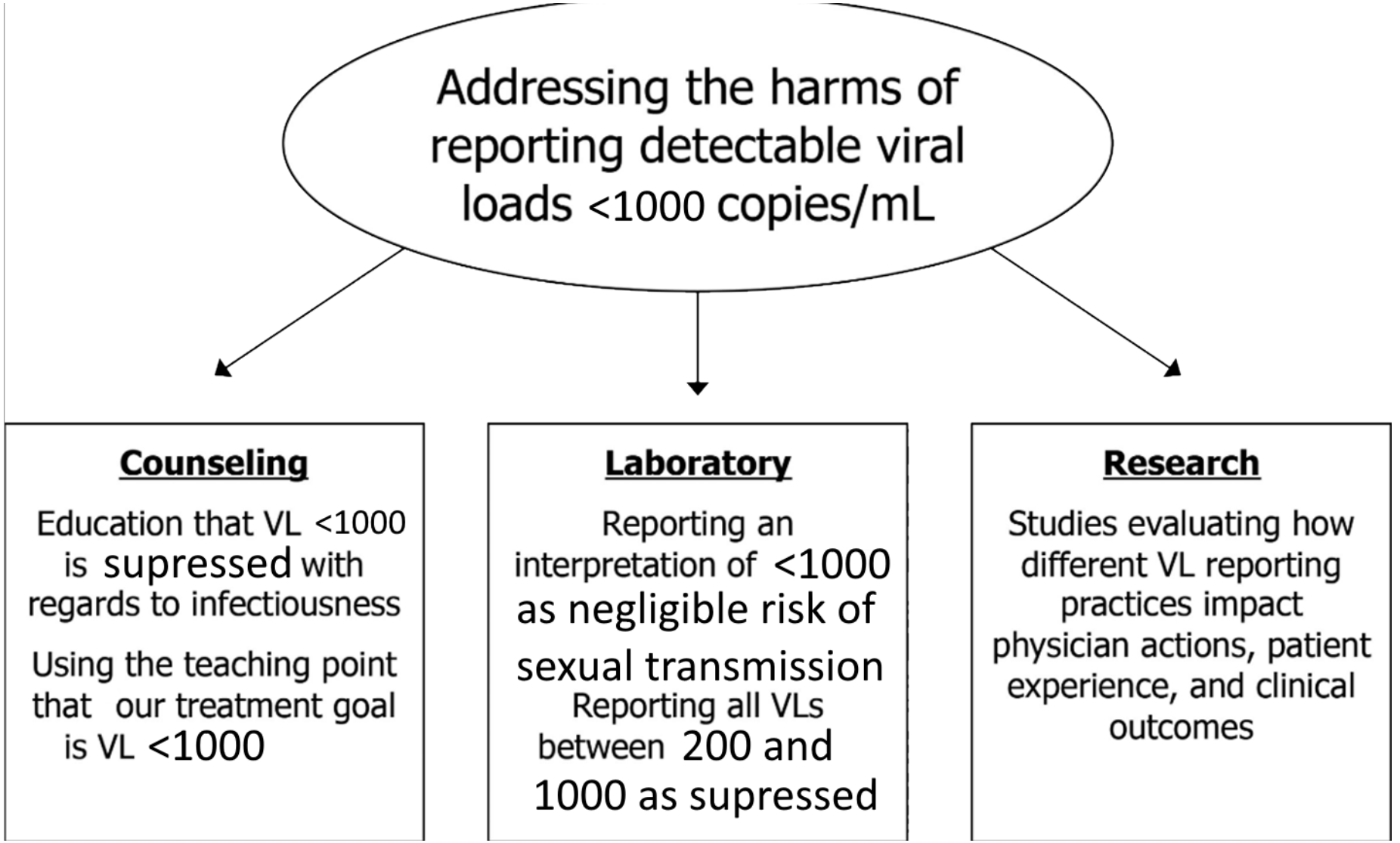
Addressing the harms of reporting detectable viral loads <1000 copies/mL
Counseling
Education that VL <1000 is supressed with regards to infectiousness
Using the teaching point that our treatment goal is VL <1000
Laboratory
Reporting an interpretation of <1000 as negligible risk of sexual transmission
Reporting all VLs between 200 and 1000 as supressed
Research
Studies evaluating how different VL reporting practices impact physician actions, patient experience, and clinical outcomes

Good Adherence, communication, trust


treatment-holidays
incorrect-regimens
drug-stockouts
cost/affordability
poor-adherence
drug-interactions
substance-use
stigma
Access
mental-health
Adherence
side-effects
treatment-interruptions
healthcare-stigma
inadequate-dosing
Blips vs Resistance

7.2 Blips

• In individuals on ART, a single viral load of 50–200 copies/mL preceded and followed by an undetectable viral load is usually not a cause for clinical concern (GPP). It should necessitate clinical vigilance, adherence reinforcement, a search for possible interactions and repeat testing within 2–6 weeks depending on ARV regimen.

7.3 Low-level viraemia on ART

• We recommend that in the context of low-level viraemia or repeated viral blips, resistance testing should be attempted (Grade 1D).

• We recommend that in the context of low-level viraemia or repeated blips a high genetic barrier regimen should be used (GPP).