

## Scripts around Meaning of Different HIV-1 Viral Load (VL) Measurements during Analytic Treatment Interruption (ATI)

	HIV-1 Viral Load:	HIV-1 Viral Load:	HIV-1 Viral Load:
	"Undetectable" / < assay lower limit of detection	< 199 copies/mL	200-1000 copies/mL
	<u>Undetectable = Untransmittable<sup>1,2</sup> (U = U)</u> : "A person living with HIV who is on treatment and has an undetectable viral load cannot sexually transmit HIV." <sup>3,4,5,6</sup> Viral suppression was defined as viral load < 200 copies/mL by the clinical studies that underlie the U = U concept <sup>1,3,4,5</sup> and also by current guidelines for use of antiretroviral treatment (ART) in adults and adolescents living with HIV. <sup>6</sup>		"There is almost zero risk of sexual transmission of HIV with viral loads of less than 1000 copies per mL." 16
Before ATI trial begins: While adherent to daily ART		<b>Risk of virologic failure.</b> See healthcare provider for discussion, adherence counseling and/or potential change of ART regimen. <sup>6,7,17,18,19,20</sup>	
	For Persons Who Use Intravenous (IV) Drugs (PWID): Treatment for substance use improves ART adherence, viral suppression, and may reduce HIV transmission risk. 6.7  • U=U was not assessed among persons actively using IV drugs. The HIV transmission risk is unknown. 6  • Employ harm reduction counseling & Practices 6.7,8,9,10  • There is a 4-7x increase in HIV incidence among users of methamphetamines (incident or persistent use by any method). 11  • Partner protections needed. 11,12,13	<ul> <li>Petectable  HIV transmission risk!</li> <li>"Sharing syringes is the second-riskiest behavior for getting HIV. Receptive anal sex is the riskiest." 12</li> <li>"An HIV-negative person has a 1 in 160 chance of getting HIV every time they use a needle that has been used by someone with HIV." 12</li> <li>Employ harm reduction counseling &amp; practices 6,7,8,9,10</li> <li>Partner protections needed 11,12,13</li> </ul>	
	Since no longer on daily ART, cannot rely	Detectable HIV transmission risk!	
<b>During ATI</b> :	on "U = U":	Transmission risk increases with duration of treatment interruption and	
Starting	Must assume no longer undetectable	number of exposures/sexual activities. <sup>3,6,14</sup>	
immediately after last dose of ART	<ul> <li>immediately after pausing ART</li> <li>Transmission risk uncertain, increases with duration of treatment interruption<sup>3,6,14</sup></li> <li>HIV viral load in blood may not reflect presence/absence of HIV in tissues or other bodily fluids (semen, vaginal secretions) while off ART.</li> <li>HIV viral load may rebound at any time. An undetectable viral load several days ago cannot be assumed to apply today.</li> <li>Partner protections needed<sup>6</sup></li> </ul>	Partner protections needed <sup>6</sup>	



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**After ART Restart** 

Since ART was interrupted, Partner Protections are needed until your viral load is undetectable for six months and you remain adherent to ART.<sup>3,6,15</sup>

Partner protections needed<sup>6</sup>

Detectable --> HIV transmission risk!

- Transmission risk increases with treatment interruption<sup>3,6,14</sup>
- Partner protections needed<sup>6</sup>

## **End Notes & References:**

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Additional Helpful References:

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