

Understanding of Viral Load among Participants Receiving Financial Incentives for Viral Suppression: Findings from a Qualitative Sub-study of HPTN 065

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BACKGROUND

The HPTN 065 (TLC-Plus) study assessed the feasibility and effectiveness of providing quarterly \$70 financial incentives (FI) in the form of gift cards to HIV-infected patients on antiretroviral therapy (ART) who were able to achieve or maintain viral suppression. Suppressed viral load (VL) was defined as HIV RNA <400 copies/mL. Nineteen participating sites in the Bronx, NY (BNY) and Washington, DC (DC) were randomized to the FI intervention and 20 sites were randomized to standard of care. A total of 39,359 FI gift cards were dispensed to patients with suppressed VL over 2 years at FI intervention sites. This qualitative sub-study was conducted for the purpose of exploring individual patient, provider and staff attitudes and experiences with the FI intervention. This sub-study complements the parent study, which will analyze the efficacy of the FI intervention using aggregate site-level data.

METHODS

The following qualitative data were collected by trained interviewers from diverse demographic backgrounds:

- Semi-structured in-depth interviews with 75 patients (aged 14-72) from 14 sites randomized to the FI intervention (all patients received at least 1 FI)
- Key informant interviews with 12 site investigators (SIs) (mostly clinicians) [6 BNY, 6 DC] from 15 sites randomized to the FI intervention

Interviews were conducted in English, audio-recorded and transcribed. Transcripts were coded for major themes and analyzed in NVivo 10.0. Sub-themes related to conceptual understanding of VL and its relationship to ART adherence were extracted and examined.

Clinical data were also collected to determine patients' VL suppression status during the study. VL suppression status was compared to qualitative understanding of VL to explore potential relationships.

RESULTS

Of the 75 patients interviewed, 71 discussed or were asked about their understanding of VL. Questions included: what VL means to them, how they understand their VL results, or how VL relates to their health. Characteristics of the 71 patients included in this analysis are shown in Table 1.

TABLE 1: Patient Characteristics

Patient Characteristics	Total (N=71)	Total (%)	Patient Characteristics	Total (N=71)	Total (%)
Location			Sexual Orientation		
Bronx	29	41%	Heterosexual	37	52%
DC	42	59%	Homosexual	26	37%
Sex			Bisexual	7	10%
Female	25	35%	Not Sure	1	1%
Male	44	62%	Education		
Transgender	2	3%	Did not graduate High School (HS)	23	32%
Age			HS/General Educational Development (GED)	17	24%
<26	13	18%	> HS/GED	31	44%
26-45	19	27%	Personal Income in USD		
>45	39	55%	<20,000	54	76%
Race			20,000 to 60,000	14	20%
Black	43	61%	>60,000	2	3%
White	10	14%	Refused to Answer		
Other	18	25%		1	1%
Ethnicity					
Hispanic	15	21%			
Non-Hispanic	56	79%			

RESULTS (CONTINUED)

PATIENTS' UNDERSTANDING OF VL

Based on their responses to questions about VL and descriptions of their VL results, patients' were categorized as either having demonstrated an accurate understanding of VL (n=35) or an inaccurate understanding (n=36) [data not shown]. Of those patients who demonstrated an accurate understanding of VL, most generally understood it as the amount of virus in the body, with a lower amount indicative of better health:

“Your viral load is very important, because the lower the viral load, the healthier you are and the less of the virus that's in your system.”
— Patient, non-Hispanic black female, 50 years old, BNY

“It means that the HIV is kept at bay, hopefully. That its replication process isn't gaining strength, so I think it's an indication of my overall health. It doesn't mean I'm cured, but, you know, it means that it's kept at bay.”
— Patient, non-Hispanic white male, 55 years old, DC

Among patients who were categorized as having an inaccurate understanding of VL:

- Many confused VL with CD4 count or incorrectly thought that VL should be high.

“Well viral load is .. in my own definition, the number of the, you know, I think, I'm not sure, I think it's the T-cells, how your blood cells are, you know. I know that the lower the number, the worse it is.”
— Patient, Hispanic white male, 58 years old, BNY

“I think there's a range, and I'm not sure of the numbers. I think if your viral load is under .. if it's under 500, you're in trouble. And you want to keep it above that.”
— Patient, non-Hispanic black male, 66 years old, DC

“Viral load - I just think of little armies of people fighting inside.”
— Patient, non-Hispanic black female, 20 years old, DC

- Some admitted a lack of understanding of VL, despite educational attempts and efforts from providers.

“[My doctor] talked to me about it, but do I understand what she was saying? Nope..”
— Patient, non-Hispanic black female, 52 years old, BNY

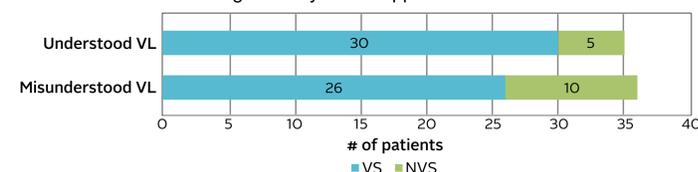
- Several patients used the term 'undetectable' incorrectly, suggesting they had heard this term but did not grasp its meaning:

“You got to take your medicine, so you want your viral load to be high and not undetectable, you have to take it, because if you don't, it's not going to be.”
— Patient, non-Hispanic black female, 54 years old, BNY

PATIENTS' UNDERSTANDING OF VL BY VL SUPPRESSION STATUS

Patients' understanding of VL was compared to their VL suppression status in the parent study. Patients who had 4 or more suppressed VL during the 2-year parent study were categorized as Virally Suppressed (VS) (n=56) and those with 3 or fewer suppressed VL were categorized as Not Virally Suppressed (NVS) (n=15). The majority of patients interviewed were VS, even among the group of patients who misunderstood VL (Figure 1). While this sub-study was not powered to determine statistical significance, this finding suggests a lack of relationship between accurate understanding of VL and ability to achieve VS.

FIGURE 1: Understanding of VL by Viral Suppression Status

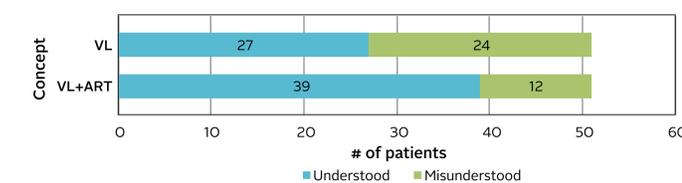


PATIENTS' UNDERSTANDING OF IMPORTANCE OF ART ADHERENCE TO VL

A total of 51 patients discussed the relationship between VL and ART adherence. Of these 51, 27 patients (53%) demonstrated an accurate understanding of VL, but 39 (76%) recognized that ART adherence would result in improved VL results (Figure 2). Some patients who misunderstood what constituted a “good” VL value were still able to grasp the importance of ART adherence in achieving a good VL:

“Because I know if I take my medication, my viral load is going to be above 500, which tells me that I'm doing well. So, that's how I look at it.”
— Patient, non-Hispanic black male, 66 years old, DC

FIGURE 2: Understanding of VL compared to Understanding of the Importance of ART Adherence to VL



CHANGE IN VL UNDERSTANDING DUE TO THE FI INTERVENTION

Of patients asked, the majority (n=37) reported no change in their understanding of VL during the study.

“I don't think that having the [gift] card has determined what I know and don't know. Before I even started on the program I was already proactive in research, and I still am, so the card hasn't changed that.”
— Patient, non-Hispanic mixed race male, 49 years old, BNY

Some patients (n=13) indicated that participation in the FI intervention increased their understanding of VL.

“I didn't know which was high and which one was supposed to be low at the time. Now as I get older, even with this program, it helped me realize which is which. What's a CD4 count, what's a viral load, and what numbers you want it to be at because I was going to the doctor, hearing but not hearing.. I really started getting into this program and that made me pay attention to the doctor more.”
— Patient, non-Hispanic mixed race male, 31 years old, DC

PROVIDERS' PERSPECTIVES

All but one SI indicated that, for the most part, their patients understood the meaning of viral load as well as its relationship to ART adherence. Many described an improvement in understanding of VL due to the FI intervention:

“Absolutely. Everybody understood that if they don't take their meds well they're running significant risks of their viral load being high and not getting the card. Absolutely. They absolutely understood. I don't know that anybody didn't understand that, that direct link between them taking their meds and the viral load being good.”
— Site Investigator-01, BNY

“We give them so much information that it's hard to keep it straight. But when this viral load concept got attached to the incentive, I think it really helped them sort of focus a little bit more. And I think it did increase their understanding.”
— Site Investigator-08, DC

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CONCLUSION

By the end of the parent study, site investigators (mostly clinicians) thought patients had a clear understanding of VL. However, about half of all patients interviewed did not demonstrate an accurate understanding of VL even though a suppressed VL was the outcome that qualified them to receive the FI. Most site investigators and some patients felt that the FI intervention improved their understanding of VL, though the majority of patients did not describe a change.

These findings suggest that an accurate understanding of VL may not necessarily be related to the ability to achieve and maintain viral suppression. The findings also suggest that the idea that ART adherence improves VL may be an easier concept to grasp for some patients than a full understanding of the meaning of VL itself.

Additional findings from this sub-study are presented in the following three posters: A-671-0004-00774; A-671-0005-00765; A-671-0026-00085.

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