**Role of Financial Incentives Along the ART Adherence Continuum: A Qualitative Analysis From the HPTN 065 Study**

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**BACKGROUND**

The Stages of Change (SOC) theory (Figure 1) suggests that individuals adapt incrementally to behaviours like adherence, requiring different strategies over the behaviour change continuum. Financial incentives (FIs) are one strategy that has been proposed to motivate adherence. In HPTN 065, patients in care and on ART for a minimum of three months were eligible to receive a $70 gift card no more than every three months if they were virally suppressed at their HIV care visits. This qualitative sub-study examined adherence barriers and the role of FIs to increase viral suppression (VS) among HPTN 065 study participants who were categorized into SOC-related adherence stages based on changes from their baseline to follow-up viral load tests. More specifically, we examine the role that FIs played in helping participants achieve and/or maintain viral suppression. We seek to:

- Identify barriers and facilitators experienced by patients receiving FIs in HPTN 065;
- Examine whether barriers and facilitators differed by stages of a SOC-related adherence continuum; and
- Assess what role patients perceived the FI intervention to play in adhering to medication.

**METHODS**

We conducted semi-structured interviews with 76 participants exiting from HPTN 065. For analysis, we categorized 73 participants with baseline viral load test results into three levels of adherence maintenance (Action + Low Adherers) using baseline and quarterly viral load tests to explore differences in perceived adherence barriers, facilitators and patterns, as well as the effect of FIs on adherence behavior. In addition, we examined all 76 participants’ data for information about pre-contemplation and relapse stages, as participants often described themselves in these stages prior to being in the study.

All interviews were conducted in English by trained interviewers. Interviews were audio-recorded and transcribed verbatim. Transcripts were then uploaded into NVivo 10.0 (QSR International) and analyzed thematically, following a process of reading, coding, data display and data reduction. Initial codes included: Medication Adherence; HIV Testing, Diagnosis and Acquisition; Opinions of the Program; and Impact on Patient. Though not explicitly assessed, the SOC framework guided analysis.

**RESULTS**

**SOC Group - Related Analysis Groups and Definitions**

<table>
<thead>
<tr>
<th>SOC Group</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Maintenance</td>
<td>ART-naive or on ART with VS at baseline and consistently maintained VS over the course of the study</td>
</tr>
<tr>
<td>Action</td>
<td>ART-naive at baseline and ≥50% but &lt;100% VS over course of study; or on ART but not at baseline, but from 50-100 VS over the course of the study</td>
</tr>
<tr>
<td>Low Adherer</td>
<td>ART-naive or on ART but not VS at baseline and &lt;50% of viral load tests suppressed over the course of the study</td>
</tr>
<tr>
<td>Pre-Contemplation</td>
<td>Discussions about delaying ART treatment after HIV diagnosis from any sub-study participant</td>
</tr>
<tr>
<td>Relapse</td>
<td>Discussions about stopping ART treatment from any sub-study participant</td>
</tr>
</tbody>
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**Overall, participants’ characteristics resembled those of the HPTN 065 study. However, some differences in sociodemographic and other characteristics exist across the three SOC adherence groups (Table 2).**

**METHODS**

**RESULTS (cont.)**

**RELAPSE:** Only two participants had viral load suppression at baseline and did not have sustained viral load suppression during study follow-up. In addition, 16 participants in the Low Adherence, Action or Maintenance Groups described relapse in adherence prior to joining the study. The reasons for relapse included incarceration or homelessness, drug addiction (crack or crystal meth), excessive alcohol use, and lack of health insurance or money for day-to-day needs.

**DISCUSSION**

Our sub-study provided an in-depth understanding of the patterns of medication adherence experienced by patients participating in an FI intervention, including their perspectives on the role that FIs played in promoting or sustaining their adherence. Over a third of sub-participants were already on ART and virally suppressed upon entering the FI intervention. Although generally appreciated, the FIs appeared to have little impact on the adherence-related motivations and behaviors of this group. Others were art-naïve or not suppressed at study entry. FIs provided the additional nudge needed for many to better integrate behaviors that would help them continue and remain undetectable. However, the FIs were insufficient to help a small group of participants overcome adherence barriers.

**LIMITATIONS**

- Use of a proxy measure – the percent of viral load tests identified as virally suppressed – rather than a structured SOC tool to approximate the SOC stage.
- Potential for low recall of adherence-related barriers among long-term maintainers.

**CONCLUSION**

FI effectiveness may vary across the SOC continuum. FIs may have greatest impact for those who are ART naive or have not yet formed explicit adherence routines or habits, such as those in our action group. FIs may be insufficient to overcome adherence lapses when strong social or structural barriers are present and are probably unnecessary for those who have strong intrinsic motivations and well integrated habits to support adherence.

**ACKNOWLEDGMENTS**

We would like to thank those who participated in the interviews for this sub-study as well as the interviewers, participating sites, and the protocol team for their dedication to this project.