

Barriers and potential interventions concerning

LOW ART ADHERENCE

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AMONG PLWH



The Problem

Through the use of ART, there has been a substantial decrease in the death rate due to HIV. This has allowed HIV to change from a death sentence to a more manageable, chronic illness. ART interventions are responsible for HIV infected patients living about 14 years longer. However, the success of ART is directly related to the patient's level of adherence.

High adherence rates result in "decreased viral load, less risk of progression to AIDS, and a decreased risk of developing drug-resistant strains of HIV." Adherence is important as both an HIV treatment and an HIV prevention strategy because it decreases rate of transmission. Non-adherence is the strongest predictor of poor clinical outcomes and mortality for PLWH. Adherence can even have wide-reaching effects on a nation's economic viability and healthcare expenditures. While it is clear that ART adherence is important, among the 1.15 million PLWH in the U.S. (a resource-rich nation), **only 33% were prescribed ART and only 19-28% of individuals achieve full viral suppression.**

Important Terms

HIV: Human Immunodeficiency Virus

AIDS: Acquired Immunodeficiency Syndrome

PLWH: People Living With HIV

ART: Antiretroviral Therapy

HAART: Highly Active Antiretroviral Therapy

MSM: Men who have Sex with Men

CD4 Cell: lymphocytes that help coordinate immune response

Barriers



fear of side effects



stigma and discrimination



complex regimens



financial accessibility



lack of social support



psychological disorders

Why is this Happening?

For many PLWH, accessing ART medication is difficult and many go untreated. However, even prescribed individuals face issues in adhering to ART medication. These limits to ART's potential are often due to widespread barriers.

The average rate of reporting
≥90% adherent HAART
adherence is **62%**

Myths and Misconceptions

"Myths and misinformation increase the stigma and discrimination surrounding HIV and AIDS." Fear surrounding PLWH began as the epidemic emerged in the 1980s. Because of this fear, many individuals falsely believe:

- HIV and AIDS are always associated with death
- HIV is associated with homosexuality, drug use, sex work, and infidelity

Inaccurate information about how HIV is transmitted, creating irrational behavior

Roughly **one in eight** people living with HIV is being denied health services because of stigma and discrimination



INTERVENTIONS

"Adherence management... must have a social, familial, personal and healthcare involvement."

Goals include: improving adherence to ART, achieving undetectable viral load, and increasing CD4 cell count among PLWH

Behavioral Solutions

are focused on social support, increasing education on HIV among PLWH and the greater public, and reframing attitudes towards HIV. This can be done through *cognitive behavioral therapy* and *increasing family/ caregiver support*.



FOCUSING ON PROVIDERS...

Social support in patient-provider relationships:

Healthcare providers should provide educational resources, simplified medical regimens, and DOT therapy. DOT (Directly Observed Therapy) consists of a provider directly supervising and ensuring that their HIV patients take their medication.

Policy Interventions

Potential interventions include:

ACCESSIBILITY of Prescriptions

- **Encouraging 90 day refills**, mandating that medical refills must refill 90 days worth of ART in place of 30 day refills.
- **Medical Synchronization**, allowing patients to set a date each month for their medical refills.
- **Lowering cost of ART therapy**
 - Utilizing generic brands of ART, not patented and increasing government aid.

Using Policy to Fight STIGMA

- **Development of hospital policies**, requiring training for health care workers and establishing HIV/AIDS care and management plans.
- **Increasing presence of HIV in community and school-based educational programs**

China's "Four Free and One Care" Policy

This policy was enacted to mend financial disparities in accessing ART, increase free HIV testing, and provide support to households of PLWH. Similar programs have been put in place in the US, such as the President's Emergency Plan for AIDS Relief in 2003 that focused on providing care for PLWH in resource-poor countries. The US could reimagine these policy programs to provide more social support resources to PLWH today. This could include free therapy and incorporating the CDC's focus on provider-patient partnerships, while also maintaining the elements of financial support in order to close disparities in accessing ART.

The key to increasing adherence, decreasing the number of PLWH, and adopting these behavioral and policy interventions is accepting that:

"Ultimately... Adopting a human rights approach to HIV and AIDS is the best intervention."

References

Avert. (2019, October 10). HIV Stigma and Discrimination. <https://www.avert.org/professionals/hiv-social-issues/stigma-discrimination>

Broder, S. (2009). The development of antiretroviral therapy and its impact on the HIV-1/AIDS pandemic. *Antiviral Research*, 85, 1-18. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2815149/>

Centers for Disease Control. (2020, January 2). HIV, Effective Interventions: Partnership for Health- Medication Adherence. [cdc.gov/hiv/effective-interventions/treat/pfh-ma/index.html](https://www.cdc.gov/hiv/effective-interventions/treat/pfh-ma/index.html)

Centers for Disease Control and Prevention. (n.d.). TB 101 for Health Care Workers, Lesson 6: Treatment of TB Disease, Directly Observed Therapy. <https://www.cdc.gov/tb/webcourses/tb101/page3832.html>

Charania, M., Marshall, K., Lyles, C., Crepaz, N., Kay, L., Koenig, L., ... HIV/AIDS Prevention Research Synthesis (PRS) Team. (2013). Identification of Evidence-Based Interventions for Promoting HIV Medication Adherence: Findings from a Systematic Review of U.S.-Based Studies, 1996-2011. *AIDS and Behavior*, 18, 646-660. <https://link.springer-com.libproxy.lib.unc.edu/article/10.1007/s10461-013-0594-x#citeas>

Fredriksen-Goldsen, K., Cheng-Shi, S., Starks, H., Chen, W., Simoni, J., Hyun-Jun, K., ... Zhang, F. (2011). “You Must Take the Medications for You and Me”: Family Caregivers Promoting HIV Medication Adherence in China. *AIDS Patient Care and STDs*, 25. <https://www-liebertpub-com.libproxy.lib.unc.edu/doi/full/10.1089/apc.2010.0261>

Gazzard, B., Moecklinghoff, C., and Hill, A. (2012). New strategies for lowering the costs of antiretroviral treatment and care for people with HIV/AIDS in the United Kingdom, 4, 193-200. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3414377/>

Iacob, S.A., Iacob, D.G., & Jugulete, G. (2017) Improving the Adherence to Antiretroviral Therapy, a Difficult but Essential Task for Successful HIV Treatment- Clinical Points of View and Practical Considerations, 8, 831. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5703840/>

Ortego, C., Huedo-Medina, TB., Llorca, J., Sevilla, L., Santos, P., Rodriguez, E., ... Vejo, J. (2011). Adherence to highly active antiretroviral therapy (HAART): a meta-analysis. *AIDS Behavior*, 7, 1381-96. <https://www.ncbi.nlm.nih.gov/pubmed/21468660>

Prescriptions for a Health America (n.d.) Medication Adherence Policies, “The Right Prescription for a Healthy America” [PowerPoint slides]. Retrieved from <https://www.csgwest.org/annualmeeting/documents/IdahoP4HAPresentationFINAL.pdf>

Pulerwitz, J., Michaelis, A., Weiss, E., Brown, L., & Mahendra, V. (2010). Reducing HIV-Related Stigma: Lessons Learned from Horizons Research and Programs, 125, 272-281. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2821857/>

Robbins R., Spector, A., Mellins, C., & Remien, R. (2014). Optimizing ART Adherence: Update for HIV Treatment and Prevention. *Current HIV/ AIDS Reports*, 11, 432-433. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4268351/>

Simoni, J.M., Amico, R.K., Pearson, C.R., & Malow, R. (2008). Strategies for Promoting Adherence to Antiretroviral Therapy: A Review of the Literature, 10, 515-521. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4059830/>