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Evaluating the Use of CABENUVA to Improve Adherence to HIV Antiretroviral Therapy

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Clinic Scenario

- Medication adherence remains a significant challenge in patient care, particular ly for HIV treatment.
- An HIV clinic provider reported frequent nonadherence to antiretroviral medica tions amongst patients.
- This persists despite supports such as cost reduction and home delivery through the Ryan White program.
- The issue highlights the need for effective strategies to improve adherence to a ntiretroviral therapy.

PICO: ***Amongst patients with HIV with a history of non-adherence, does injection of CABENUVA every two months compared to oral medication increase adherence to HIV antiviral medication?***

Background

- HIV is a retrovirus targeting CD4+ T cells; AIDS is defined by CD4 <200.
- Risk factors: men who have sex with men, IV drug use, unstable housing.
- In 2024, 40.8 million people lived with HIV; 630,000 died from it globally.
- Routine screening recommended for ages 13–64 with 4th-generation tests.
- Treatment: combination ART targeting multiple viral stages (NRTIs, NNRTIs, integrase & protease inhibitors).
- Long-acting injectable CABENUVA is an option for patients with viral suppression.
- Medication adherence remains a significant challenge.

Search strategy

- Literature search used the term “HIV” combined with “statistics,” “treatment,” and “diagnosis” using the Boolean operator AND
- Sources consulted: DynaMed and PubMed

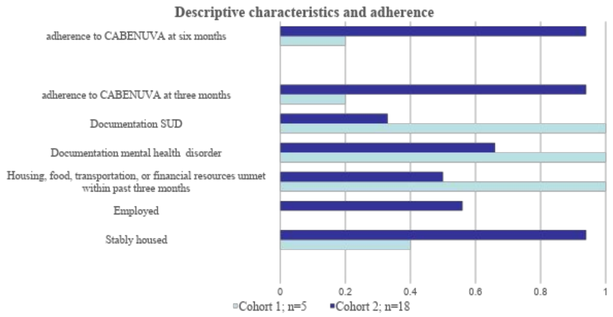
Key articles reviewed in DynaMed:

- *“Consolidated guidelines on HIV, viral hepatitis and STI prevention, diagnosis, treatment and care for key populations” – reported by the WHO.*
- *“United States Public Health Service guideline on the management of occupational exposures to HIV and recommendations for postexposure prophylaxis.”*
- *“Adherence to protease inhibitor therapy and outcomes in patients with HIV infection.”*
- *“Patient support and education for promoting adherence to highly active antiretroviral therapy for HIV/AIDS.”*

Results

Pros of CABENUVA:
- Eliminates daily dosing
- Preferred by many patients
- Comparable viral suppression

Cons of CABENUVA:
- Requires reliable clinic follow-up
- Limited data in severely non-adherent populations
- Social determinants remain primary driver of failure



Fletcher L, Burrowes S, Sabin LL, et al. Long-Acting Injectable ART in Practice: A Mixed Methods Implementation Study Assessing the Feasibility of Using LAI ART in High Risk Populations and At Alternative Low Barrier Care Sites. *AIDS Patient Care STDS*. 2024;38(5):221-229. doi:10.1089/apc.2024.0048

Long-Acting Injectable ART in Practice: A Mixed Methods Implementation Study Assessing the Feasibility of Using LAI ART in High Risk Populations and At Alternative Low Barrier Care Sites doi:10.1089/apc.2024.0048	RCT found via PubMed	23 patients in total with 5 patients in the category of high risk social determinants of health seen at a street clinic (Cohort 1) compared to 18 patients in a traditional HIV clinic (Cohort 2). All patients received oral antiretroviral therapy prior to injectable monthly therapy.	Compared rates of adherence to injectable antiretroviral HIV therapy amongst those who experience barriers to social determinants of health in a street clinic compared to those in a traditional clinic who do not experience such barriers.	Identified that injectable antiretroviral therapy does not increase adherence amongst those experiencing socioeconomic barriers.	Amongst cohort 1 only one patient out of five successfully adhered to therapy while in cohort 2, 17 out of 18 patients successfully adhered to therapy.
Pre-exposure prophylaxis (PrEP) containing long-acting injectable cabotegravir (CAB-LA) is safe and highly effective for cisgender men and transgender women who have sex with men DOI: 10.1056/NEJMoa2101016	RCT found via PubMed	Patients were cis men who have sex with men or trans woman who have sex with men with elevated risk for HIV. Amongst TDF-FTCT group: 2284 randomized patients who were blinded Amongst Cabotegravir group: 2282 patients who were blinded	Compared rates of adherence to cabotegravir vs tenofovir disoproxil fumarate plus emtricitabine with a trial design that followed patients when they were blinded and unblinded.	Cabotegravir had significantly increased rates of adherence during the blinded stages of the study compared to oral tenofovir disoproxil fumarate.	HIV incidence was lower with long-acting cabotegravir PrEP (0.41 per 100 person-years) compared to daily oral PrEP (1.29 per 100 person-years). After unblinding, adherence rates were 0.82 per 100 person-years for cabotegravir versus 2.27 per 100 person-years for daily oral therapy.
Long-Acting Injectable Cabotegravir + Rilpivirine for HIV Maintenance Therapy: Week 48 Pooled Analysis of Phase 3 ATLAS and FLAIR Trials doi:10.1097/QAI.0000000000002466	RCT found via PubMed	1184 patients with HIV were randomized and screened with two patients not included within the study due to non compliance.	Compared long acting injectable cabotegravir and rilpeverine vs daily oral therapy.	Demonstrated long acting injectable antiretroviral therapy is equally efficacious in reducing HIV viral load compared to daily oral medication.	At week 48, 2% of participants in both injectable and oral ART groups had detectable HIV, while over 90% maintained viral suppression, showing similar efficacy.

Conclusion

- Long-acting ART reduces daily pill burden and may improve patient satisfaction. Offers an alternative for patients experiencing stigma, pill fatigue, or chaotic schedules.
- Does not independently resolve barriers related to housing instability, transportation, or mental illness.
- Long-acting injectable cabotegravir/rilpivirine (CABENUVA) is equally effective as oral ART.
- Long-Acting Injectable ART in Practice: A Mixed Methods Implementation study had one cohort with merely five participants thereby decreasing validity of results. Further research must be conducted.
- Current evidence does not conclusively demonstrate improved adherence among patients with established non-adherence, particularly those facing socio economic instability.

Future Directions

- Conduct a project comparing adherence to injection by CABENUVA compared to oral medication amongst specifically underserved population
- Retrospective cohort analysis examining EHR data of adherence amongst this specific population when given CABENUVA compared to oral antiretroviral medication after successfully demonstrating adherence to oral medication

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Acknowledgments

Thank you to my mentor Dr. Angela Zell for her guidance throughout this project. Thank you to Ingham County Health Department Community Health Center for the opportunity to work in the clinic and specifically to Dr. Peter Gulick for his guidance in the HIV clinic.