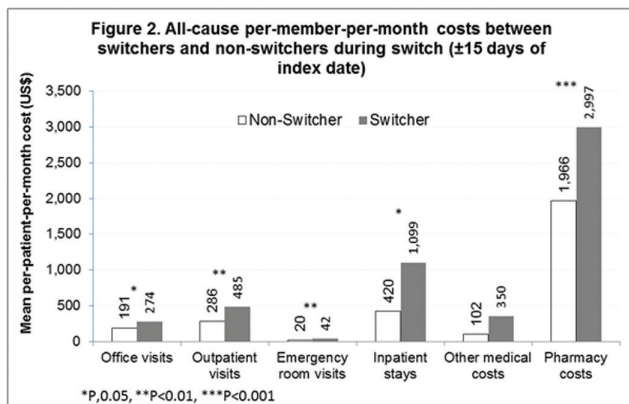
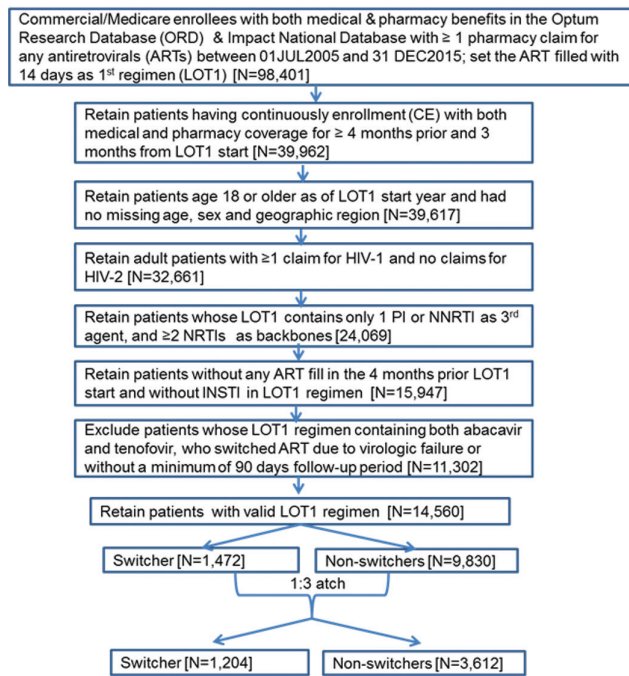


Figure 1. Patient Attrition Flow Chart



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1406. Avoiding Inpatient Delays in Antiretroviral Therapy via Low Cost Formulary Management

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Session: 157. HIV: Health Care Utilization and Costs
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Background. Of 8 formulary HIV medications at our institution, 3 are no longer first line treatments. Agents unavailable on formulary are administered from a patient's own supply. We examined the impact of availability of antiretroviral therapy (ART) on time to appropriate therapy among HIV positive inpatients.

Methods. Adult inpatients who received ART from 11/2015 – 10/2016 were included in this single-center review. Data were evaluated by encounter; individuals with multiple admissions were counted per admit. Descriptive statistics were used to evaluate the time from admission to ART order and administration. We noted discrepancies between ordered and home ART regimen, and any administration of partial therapy. Patients not taking ART prior to admission or without documentation of a home ART regimen were excluded from the outcomes analysis. A cost analysis was conducted to describe the financial impact of any recommended formulary changes.

Results. 36 patients with 55 inpatient encounters were evaluated; 46 (84%) had a documented home ART regimen. Mean age was 47.8 years, 67% were male, 36% met

criteria for AIDS by CD4 cell count. Creatinine clearance was < 60 ml/minute in 33% of subjects, 25% were admitted for an infectious issue. Median length of stay was 5 days. Half (49%) were taking nucleoside reverse transcriptase inhibitors, 22% integrase inhibitors, 19% protease inhibitors, 3% non-nucleoside reverse transcriptase inhibitors. In the 7 encounters (15%) with all ART on formulary, 100% received their full ART regimens as inpatients vs. 69% of those with partial or no ART on formulary. Median time to therapy doubled in patients who had partial or no home ART on formulary: 25 hours (median of 1 missed dose) vs. 12 hours (median of 0 missed doses). Anticipated annual cost of formulary revisions, including addition of 4 agents, was \$6016.37.

Conclusion. Having a complete ART regimen on formulary substantially increased likelihood of complete ART administration without delay. Adding an NRTI alternative to tenofovir was needed due to high rates of renal dysfunction; adding agents with higher barriers to resistance, dolutegravir and darunavir, were important as genotypes and viral loads are not always known at admit. Expanding the ART formulary provides a significant improvement in quality of care at a reasonable cost.

Disclosures. All authors: No reported disclosures.

1407. Management of End Stage Renal Disease in Persons Living with HIV: A Cost-Effectiveness Analysis

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Background. HIV⁺ kidney transplant (KT) for persons living with HIV (PLWH) is both safe and effective, with comparable patient and graft survival rates relative to HIV KT. The objective of this study was to evaluate the cost-effectiveness of HIV⁺ KT relative to HIV KT and dialysis.

Methods. A decision-tree framework was used to assess the cost-effectiveness of the above treatment options for PLWH. Clinical outcomes at 3 years for KT and effectiveness data (expressed in QALYs) were abstracted from previous publications, when available. Costs were assigned from a payer's perspective using the US Renal Data System and published literature (expressed in 2014 USD). This analysis assumed a three-year time horizon. Sensitivity analyses were explored to understand how changes in 1) acute KT rejection and 2) KT failure impact cost effectiveness. Limitations include small sample size and short follow up time in referenced studies and a lack of health utility data in HIV positive persons with renal failure. We used TreeAge Software (Williamstown, MA).

Results. HIV⁺ KT was most cost effective (\$299,904/QALY) while both HIV KT (\$329,676) and dialysis (\$444,645) were dominated, meaning more costly and less effective. Results were sensitive to the higher KT failure (26% vs. 16%) and acute rejection (39% vs. 17%) observed with HIV KT relative to HIV⁺ KT. In sensitivity analysis, as HIV⁺ KT rejection rates approach 20%, HIV KT becomes a cost-effective option. As HIV⁺ KT failure rates approach 26%, HIV⁺ KT becomes cost effective.

Conclusion. Despite its limitations, this analysis demonstrates that HIV⁺ kidney transplantation is a cost-effective alternative for PLWH under certain conditions. As KT outcomes, like graft failure and acute rejection rates, continue to improve, it is likely that both HIV positive and negative KT will be cost-effective alternatives to dialysis.

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1408. The Costs of Home-Based ART Initiation and Mobile Refill in Uganda

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Background. Antiretroviral therapy (ART) is effective at reducing HIV-associated morbidity, mortality, and transmission, but 20 million people who meet WHO eligibility criteria for ART are not in care. While decentralized care is a promising strategy to expand ART access, the costs of implementing a community-based model on a large scale remain unknown.

Methods. The DO-ART study is a randomized trial of community- vs. clinic-centered ART delivery in South Africa and Uganda using 12-month viral suppression as the primary outcome. We evaluated the costs of home-based ART initiation and refill in southwest Uganda using time-and-motion studies, staff interviews, and budgetary analysis. Costs categories included medications, supplies, personnel, building and utilities, start-up, vehicles, and community mobilization. We used a programmatic perspective with a 3% discount rate and removed research-associated costs.

Results. The largest cost categories included medications, supplies, and salaries, constituting 41%, 27%, and 17% of the total cost, respectively. Time-and-motion studies revealed that each outreach worker could serve an average of three patients per day in a fully decentralized model. In a scenario of providing home-based ART to 1400 patients across seven sub-counties, the yearly per-patient cost was estimated to be \$304 (2016 USD), which is similar to literature reports of the costs of facility-based ART provision.

Conclusion. These estimates suggest that home-based ART may be a realistic delivery option, especially if it is found to be effective at improving viral suppression. Further research is needed to evaluate how this intervention can most efficiently scale to provide widespread ART access over a large geographic area.

Disclosures. All authors: No reported disclosures.