How Ready are Ryan White Clinics to Implement Long-acting Injectable Antiretrovirals? Findings from a National Cross-sectional Survey

Adati Tarfa, PharmD, M.S, PhD(c)

Adherence 2023 • June 11-13 • Puerto Rico
Disclosures

None
Outline

• Background
• Methods
• Results
• Conclusion
Background

- In 2021 US Food and Drug Administration (FDA) approved Cabotegravir (CAB) and rilpivirine (RPV) long-acting formulation (LAI CAB/RPV))
  - Replacement antiretroviral therapy (ART) for adults (≥18 years old) with HIV who are virally suppressed (HIV RNA level <50 copies/mL)
  - Monthly or every 2-month intramuscular injection

Study aim: Assess readiness and barriers to implement LAI CAB/RPV across Ryan White-funded clinics in the U.S
Methods

• Cross-sectional survey between December 2020 and January 2021

• Survey measures
  – Validated four-item measures: Acceptability (AIM), Appropriateness (IAM), and Feasibility (FIM) of intervention measures
  – 5-point Likert scales rating potential barrier with responses ranging from 1 for “not a barrier at all” to 5 for an “extreme barrier”
• AIM, IAM, and FIM were calculated by summing the responses for the individual questions

• Associations of AIM, IAM, and FIM with other measures such as clinic characteristics were assessed using Spearman rank correlations for continuous measures and Wilcoxon rank-sum tests or Kruskal-Wallis tests for categorical measures

• For barrier measures, mean values were calculated for each potential barrier with higher scores indicating a larger barrier

• **Software:** STATA Version 17 for data analysis
Results

• Out of the total sample size (N=270), 44 RW Part C programs completed the survey (16% completion rate)

• Clinics had a collective active patient population mean (SD) of 899 (697) and ranged from 47 to 3700 patients

• Approximately 38% of clinics were federally qualified health centers, 36% were academic medical centers, and 20% are AIDS service organization/Community based organization, 14% are hospital outpatient clinic and 9% are non-profit private clinic
<table>
<thead>
<tr>
<th>Table 1: Clinics’ readiness for LAI CAB/RPV and strategies for implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Has the clinic conducted a patient needs assessment to prepare for the implementation of LAI CAB/RPV?</strong></td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Unsure</td>
</tr>
<tr>
<td><strong>Has the clinic conducted a staff needs assessment to prepare for the implementation of LAI CAB/RPV?</strong></td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Unsure</td>
</tr>
<tr>
<td><strong>Has the clinic developed policy and procedures for the implementation of LAI CAB/RPV?</strong></td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Unsure</td>
</tr>
<tr>
<td><strong>For which of the following patient groups is your clinic likely to prescribe long-acting injectable ART? (Select all that apply)</strong></td>
</tr>
<tr>
<td>Patients who are adherent to daily oral ART</td>
</tr>
<tr>
<td>Patients who are not adherent to daily oral ART</td>
</tr>
<tr>
<td>Patients who experience pill fatigue</td>
</tr>
<tr>
<td>Patients who experience pill aversion</td>
</tr>
<tr>
<td>Patients who express interest in long-acting injectable ART</td>
</tr>
<tr>
<td>Patients who are concerned about HIV disclosure</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td><strong>At which of the following locations does your clinic plan to implement long-acting injectable ART? (Select all that apply)</strong></td>
</tr>
<tr>
<td>The clinic</td>
</tr>
<tr>
<td>Patient’s home</td>
</tr>
<tr>
<td>Retail pharmacy</td>
</tr>
<tr>
<td>Infusion center</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td><strong>Rate your clinic’s overall readiness to implement long-acting injectable ART</strong></td>
</tr>
<tr>
<td>Not at all ready</td>
</tr>
<tr>
<td>Slightly ready</td>
</tr>
<tr>
<td>Somewhat ready</td>
</tr>
</tbody>
</table>
Associations between implementation measures and clinic characteristics

- There was a significant association between the AIM measure and the proportion of patients insured by Medicaid (AIM, \( \rho = 0.312, p = 0.050 \))

- There was a significant negative association between feasibility implementation measures and the proportion of Cisgender females (\( \rho = -0.403, p = 0.010 \))

- Clinics that are AIDS service organizations/Community based organizations (AIM mean = 19.50, SD = (1.41); IAM mean = 19.25, SD = 1.49, FIM mean 19.13, SD (1.36)) consistently score the highest on each of the three measures of implementation
Associations between implementation measures and clinic characteristics

- As the degree of adoption increased, the AIM, IAM, and FIM scores increased, and clinics that actively seek new clinical ideas and initiatives to integrate into their practice had means of (18.63 (SD =1.97), 18.71 (SD =1.83)) and 17.63 (SD = 2.45), respectively compared to clinics that do not provide new clinical services unless it is required (Means = 14, 16, and 16, respectively)

- The associations between the clinic’s degree of adoption and implementation measures were significant for AIM and IAM (p= 0.013 and 0.019 respectively)
Long acting injectable ART meets my approval

Long acting injectable ART is appealing to me

I like long acting injectable ART

I welcome long acting injectable ART

Long acting injectable ART seems fitting

Long acting injectable ART seems like a good match

Long acting injectable ART seems possible

Long acting injectable ART is implementable

Long acting injectable ART seems easy to use

Long acting injectable ART seems doable

Long acting injectable ART seems possible

Long acting injectable ART seems doable

I welcome long acting injectable ART

I like long acting injectable ART

Long acting injectable ART is appealing to me

Long acting injectable ART meets my approval

Figure 1: Proportion of respondents who agreed/completely agreed with survey questions about acceptability, appropriateness, feasibility of LAI CAB/RPV
The five top barriers were concerns about:

- Drug resistance in patients who do not adhere to monthly visits
- Patient adherence to monthly visits
- Cost of implementing LAI injectable ART
- Patient transportation for monthly visits
- Tracking patients who do not show for injection visits
Conclusion

• The success of LAI CAB/RPV implementation is highly dependent on clinic readiness to provide the novel therapy

• Our findings are helpful in assessing readiness to inform implementation considerations for HIV clinics as they anticipate scale-up of LAI across the United States

• Our findings show that RW clinics agree that LAI CAB/RPV is feasible, acceptable, and appropriate. However, a majority do not agree/completely agree that it is easy to use

• Clinics can be adequately prepared for implementation by addressing patient-related barriers to implementation such as adherence to clinic visits and transportation
Acknowledgements

• University of Nebraska Medical Center – Specialty Care Center

• Co-authors:
  – Harlan Sayles, University of Nebraska Medical Center, College of Public Health, University of Nebraska, Omaha, Nebraska
  – Sara H. Bares, University of Nebraska Medical Center, College of Medicine, University of Nebraska, Omaha, Nebraska
  – Joshua P Havens, University of Nebraska Medical Center, College of Pharmacy, University of Nebraska, Omaha, Nebraska
  – Nada Fadul, University of Nebraska Medical Center, College of Medicine, University of Nebraska, Omaha, Nebraska,
Questions

Adati Tarfa, PharmD, MS
PhD Candidate in Health Services Research in Pharmacy
University of Wisconsin-Madison, School of Pharmacy
Email: tarfa@wisc.edu
Website: https://www.adatitarfa.com/
@AATarfa_