

Introduction

Data from long-acting injectable cabotegravir-rilpivirine (LAI CAB-RPV) clinical trials demonstrated safety and efficacy by body mass index (BMI).¹

- Increased risk of virologic failure associated with having at least two out of three of the following criteria:²
 - BMI ≥ 30
 - Two RPV mutations
 - HIV-1 subtype A6/A1
- Modeling studies have demonstrated that obesity can impact drug concentrations.³

Study objective: Examine real life data regarding impact of BMI on viral load (VL) suppression in an urban hospital-based Ryan White Clinic.

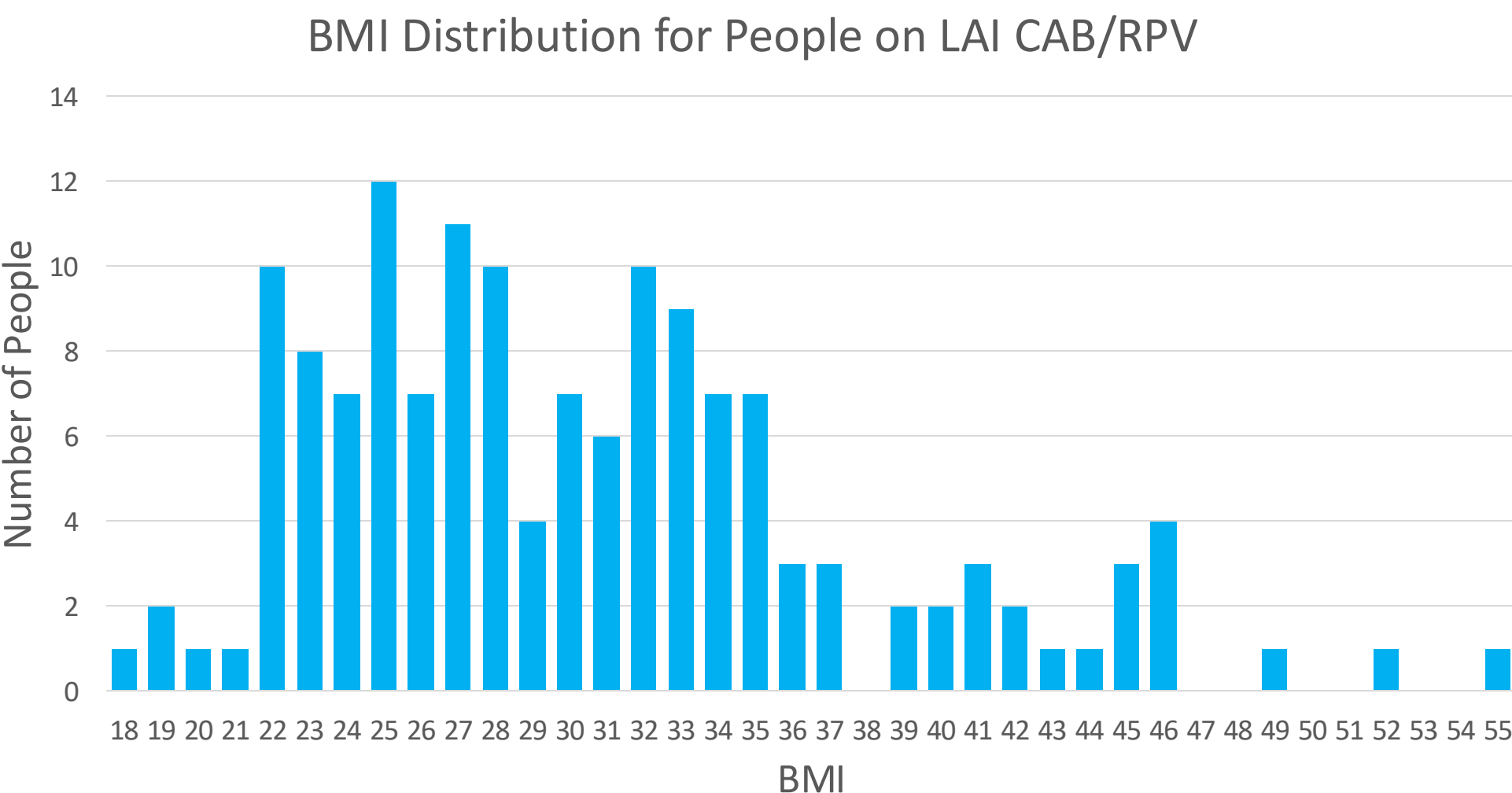
Methods

- Retrospective cross-sectional analysis
- Primary endpoint: differences in low level viremia (LLV) between BMI <30 and ≥ 30
 - LLV (IAS-USA guideline)⁴
 - Defined as VL <200 and ≥ 50
 - Measured in copies/mL
 - BMI measured in kg/m²
- Clinical data collected using electronic medical records examining VL and BMI in past 6 months
- Chi-squared used to determine statistically significant differences

Results

Data as of: March 31, 2025

- 150 PLWH are on LAI CAB-RPV
 - 99% have VL of <200
- Average BMI was 30.5 (SD ± 7.2)
 - 19 people (12.7%) had a BMI ≥ 40



Results by BMI and VL		
	BMI <30	BMI ≥ 30
VL < 50	71 (93.4%)	62 (84.0%)
VL ≥ 50	5 (6.6%)	12 (16%)
Total	76	74

No statistically significant difference between LLV in the group with BMI <30 and the group with BMI ≥ 30

$\chi^2 (1, N=150)=3.47, p=0.63$

In the 19 people with BMI ≥ 40 , 100% had VL <50 .

Conclusions

No difference in LLV between lower and higher BMI groups.

LAI CAB-RPV demonstrated to be effective across BMI ranges 18-55.

100% of patients with BMI ≥ 40 had VL < 50 , showing LAI CAB-RPV was effective at higher BMIs in our patients.

Future Directions & Limitations

- Limitation includes lack of data in higher BMI categories (>35)
- Examining LLV over longer durations of time in these populations, this was only cross-sectional.
- Data examining LAI CAB-RPV at BMI cutoffs higher than 30 and in patient populations with a higher mean BMI

With increasing data on BMI and LAI CAB-RPV, our team hopes that providers become more comfortable considering the use of medication in PLWH in higher BMI categories to battle medication adherence, stigma, and promote patient choice.

References

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