



The Paradox of Retention

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Background

Several recent studies have shown that patients not retained may still be virally suppressed.

Cohen SM, et. al. HIV viral suppression among persons with varying levels of engagement in HIV medical care, 19 U.S. jurisdictions. *JAIDS*. 2014.

- Older, white & API patients who were unretained had substantially higher rates of suppression (20-40%) than unretained patients who were younger or self-identified as Black or Hispanic.
- Association between retention and viral load suppression strongest in vulnerable populations.

Yehia BR, Rebeiro P, Althoff KN, et al. The Impact of Age on Retention in Care and Viral Suppression. *JAIDS*. 2015.

- No association between suppression and retention in patients > 35 years
- Authors conclude that retention is most important among younger HIV-infected adults

Our goal was to evaluate the prognostic value of retention in HIV care in New York State.

The eHIVQUAL Platform

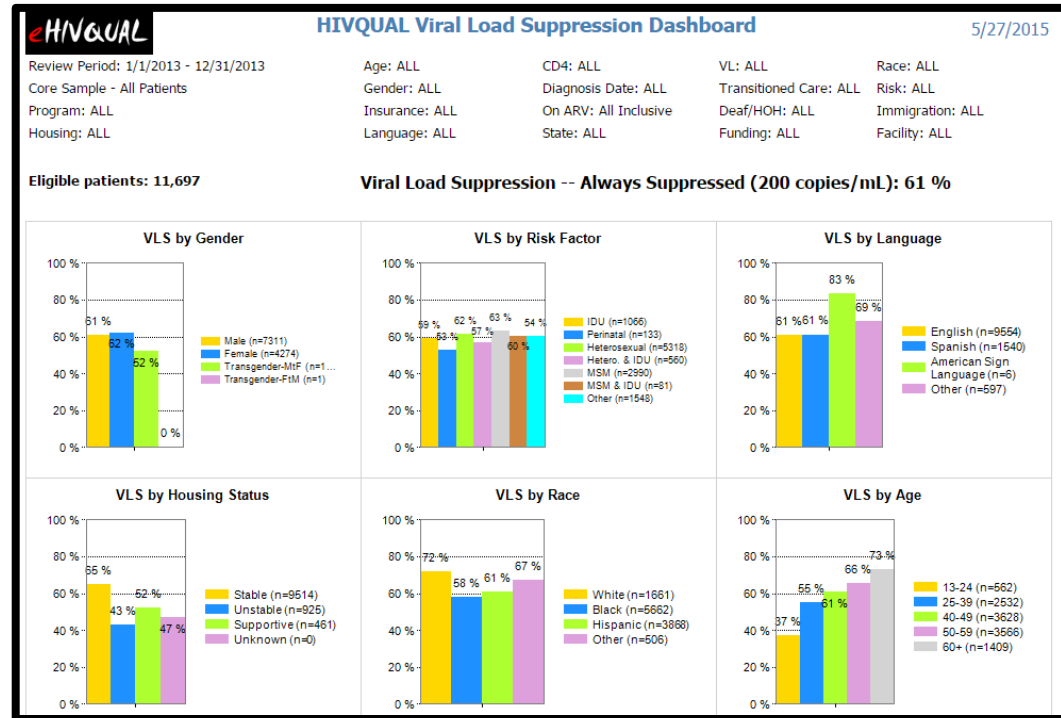
Performance measurement tool that drives quality improvement activities in all HIV programs in New York State

Clinics abstract data from patient medical records and upload it into a

secure, web-based platform.

Clinics use the embedded dashboard (pictured) to monitor the performance of their respective programs.

Indicators include viral load suppression and retention in care among other clinical and preventative indicators.



Participating Facilities

N = 187

Location

Urban 171 (92%)

Rural 16 (8%)

Mean HIV+ Caseload 61 [range: 40-359]

Mean Sample Size 48 [range: 33-85]

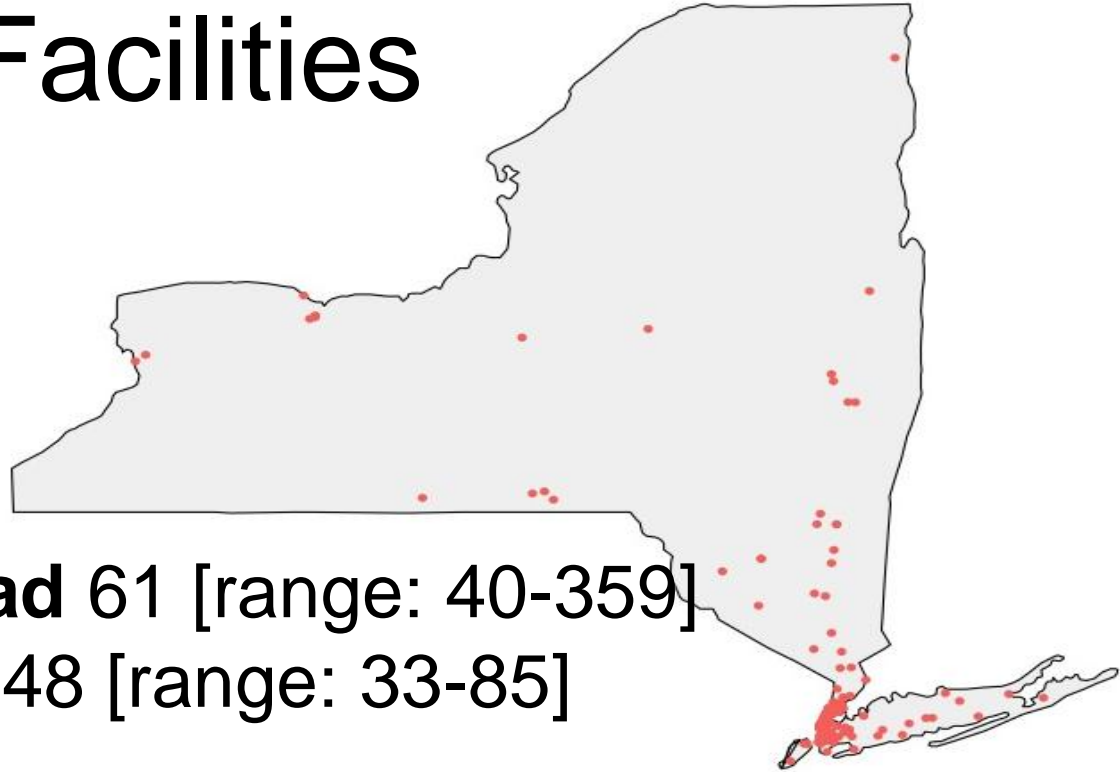
Facility Type

Designated AIDS Center Hospitals - 39

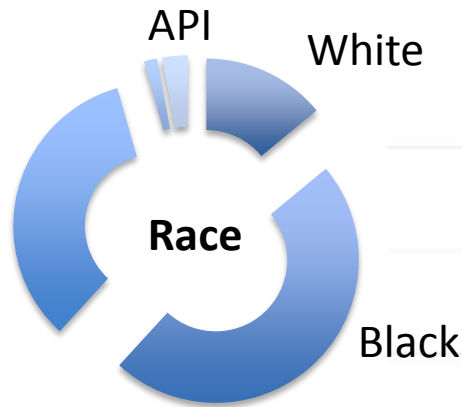
Community Health Center - 92

Drug Treatment Center - 37

Hospital - 17

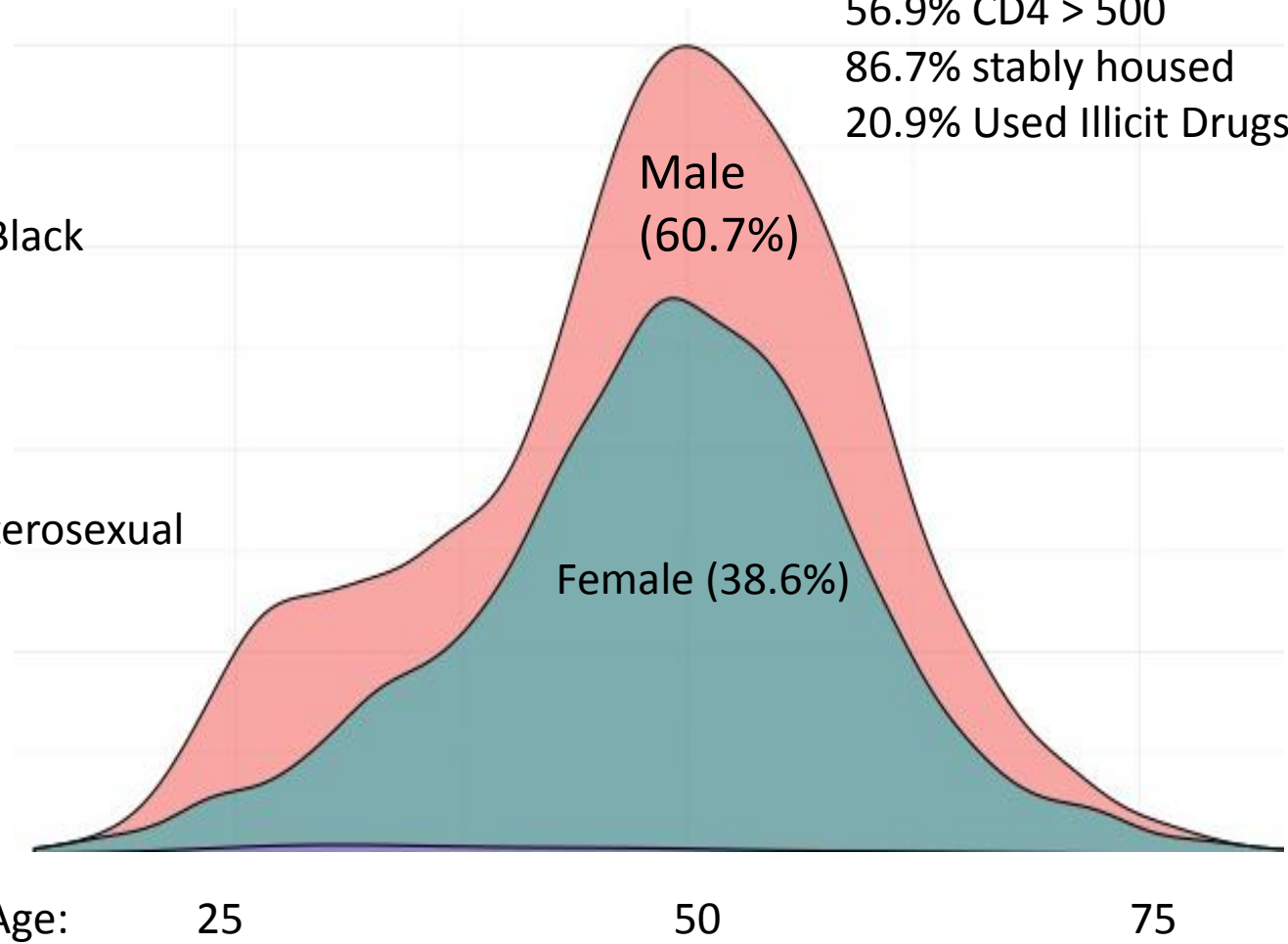


Study Population (N = 8213)



Other Characteristics

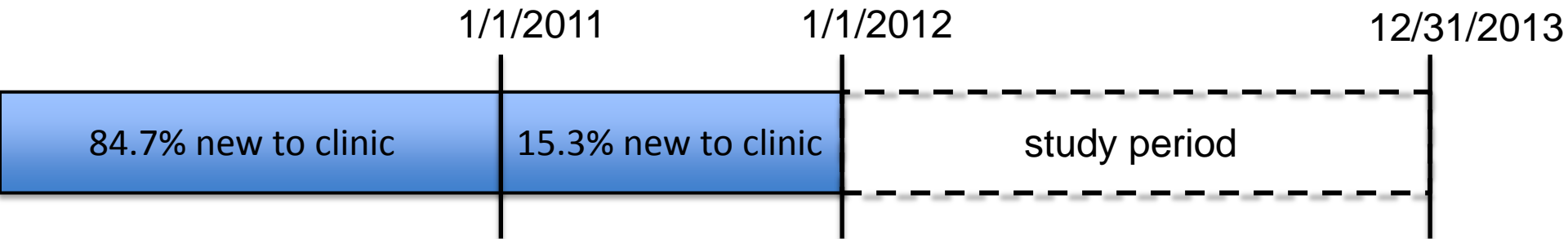
- 56.9% CD4 > 500
- 86.7% stably housed
- 20.9% Used Illicit Drugs



Inclusion Criteria

[1] Established patients first seen at their respective clinics before January 1, 2012.

[2] Initiated ART before January 1, 2012



Exclusion Criteria

[1] Did not receive care from multiple sites.

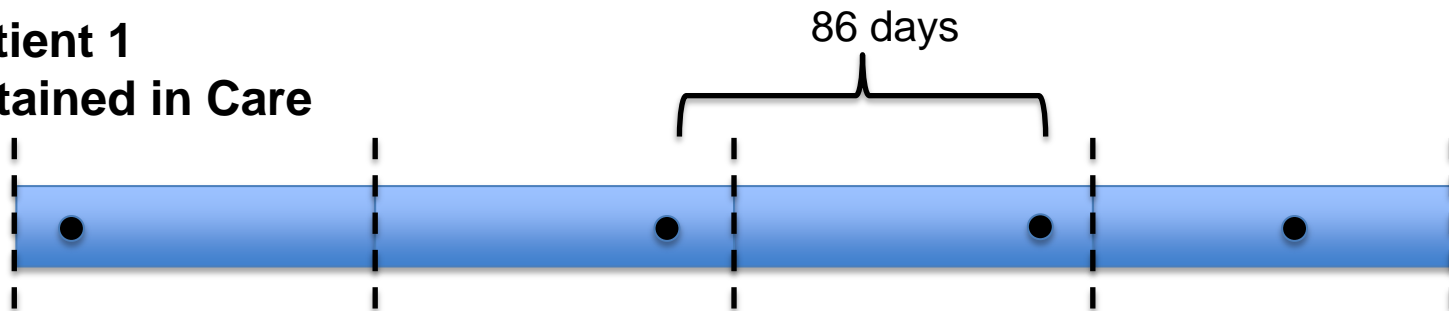
522 patients were excluded for the following reasons:

- a) transfer of care to another facility
- b) relocated to another geographic area
- c) were incarcerated for a period > 90 days
- d) received care at a residential drug treatment program.

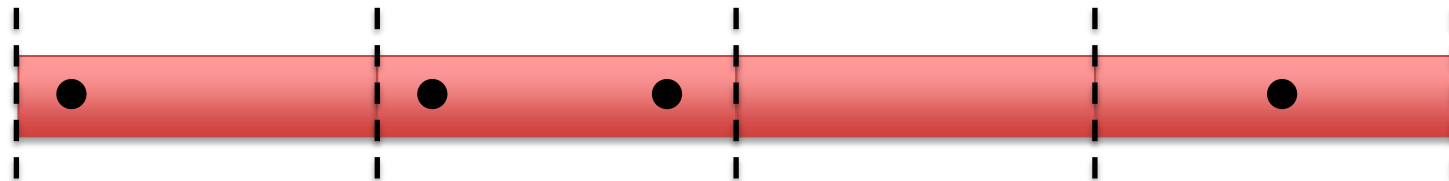
Defining Retention

Retention: A visit in each 6-month period of the 24-month measurement period with > 60 days between visits in adjacent periods.

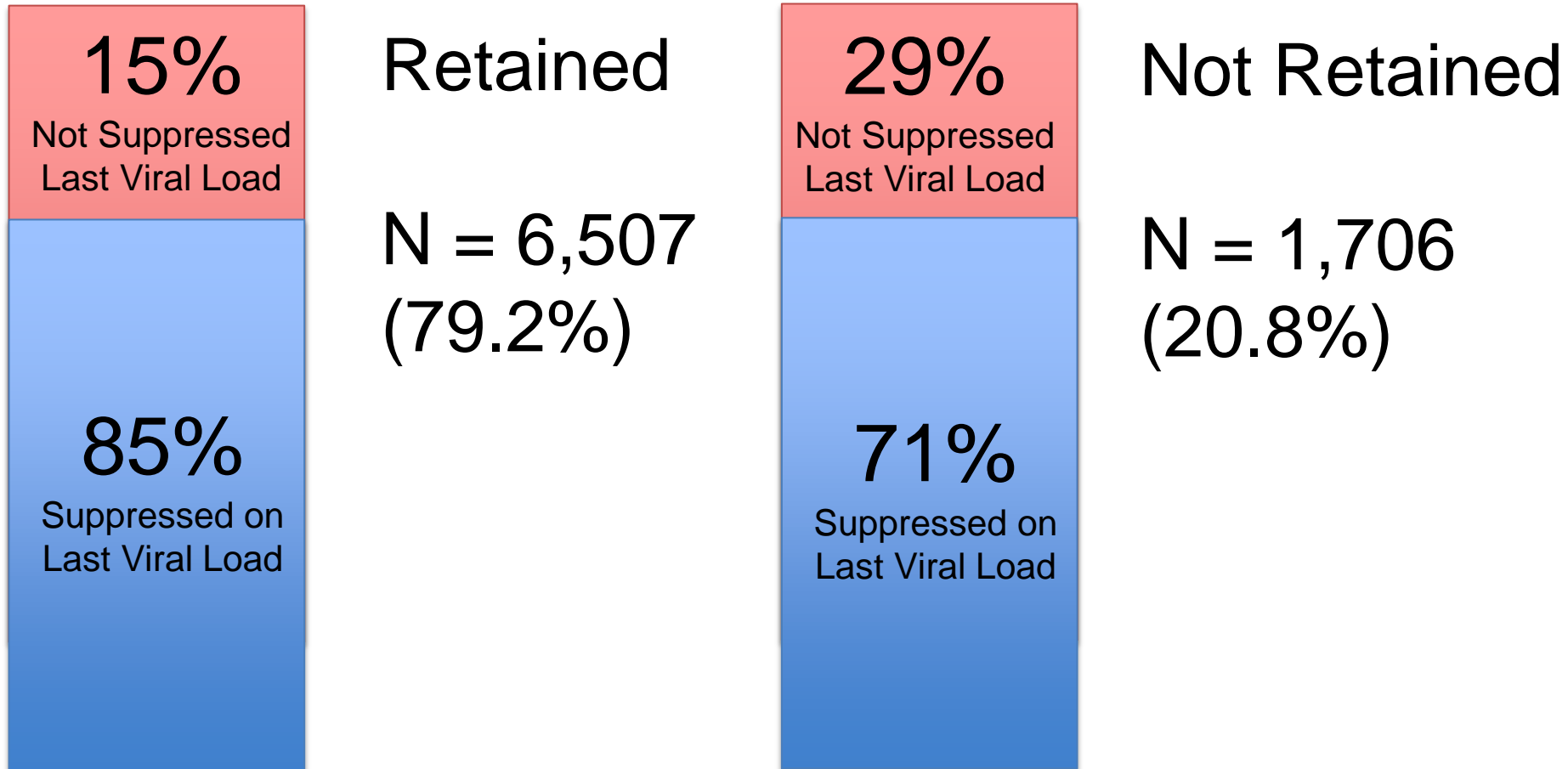
Patient 1
Retained in Care



Patient 2
Not Retained in Care



Viral Load Suppression, Stratified by Retention in Care



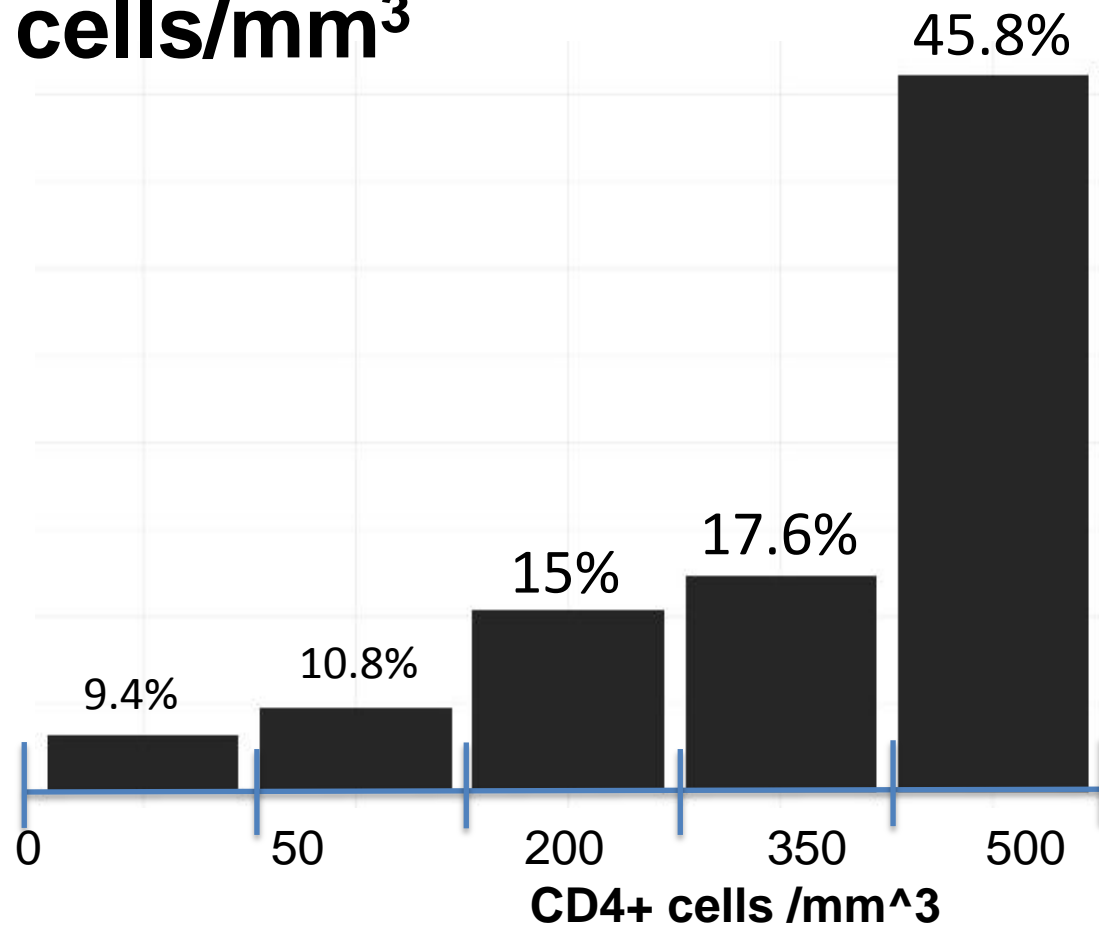
* Suppressed on final viral load of the review period

Clinical Outcomes of Unretained Patients

N = 1,706

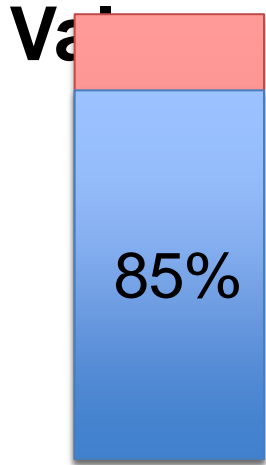


Most recent CD4, cells/mm³



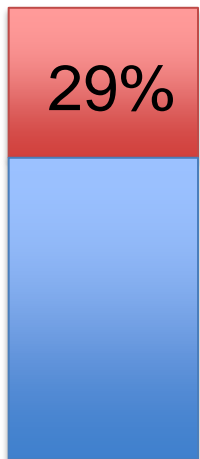
Statistical Measures of Validity

Positive Predictive



Proportion of patients who achieved retention and also achieved viral suppression

Negative Predictive Value

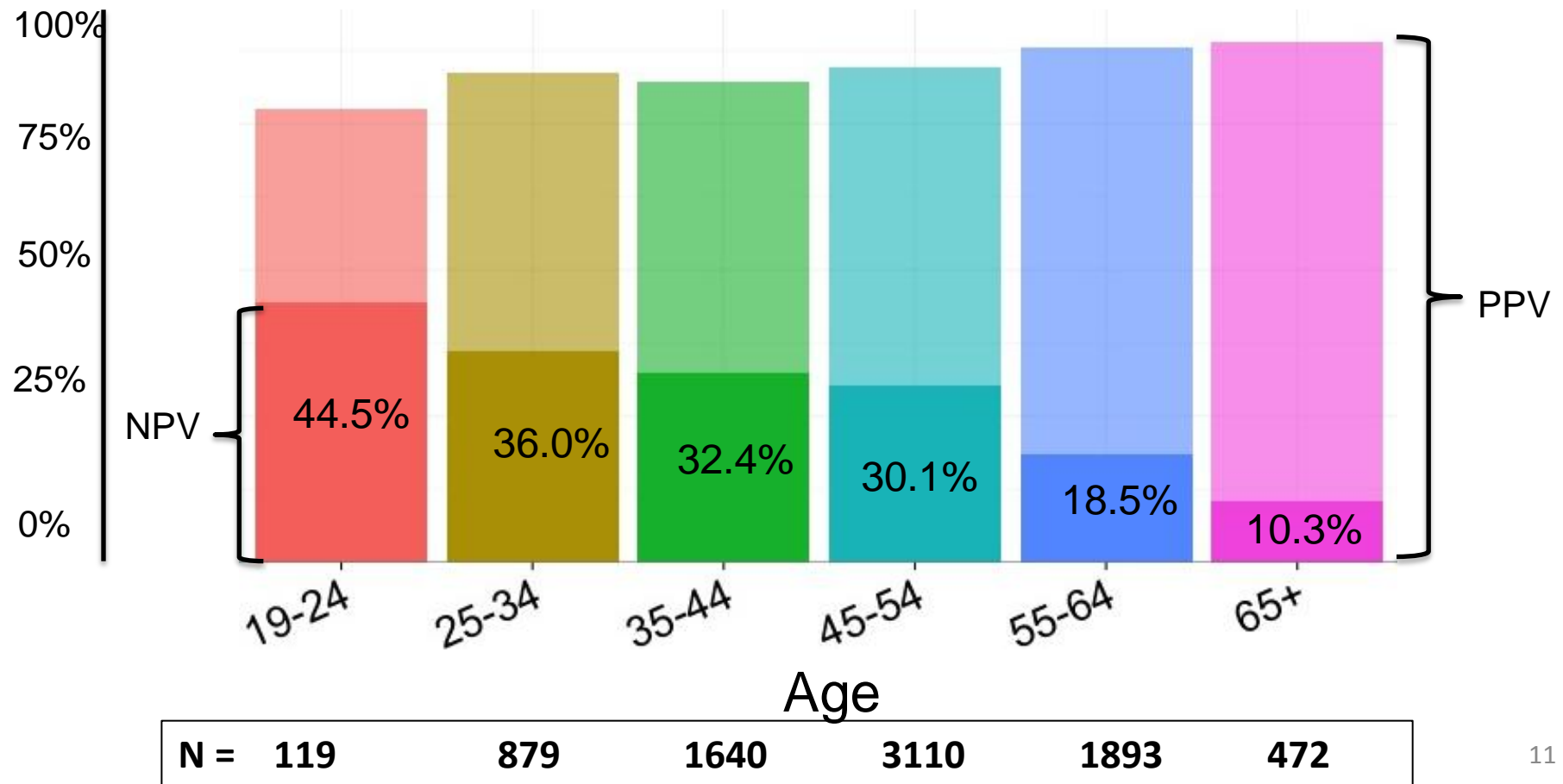


Proportion of patients who *did not* achieve retention and also *did not* achieve viral suppression

Retention and Suppression, stratified by Age

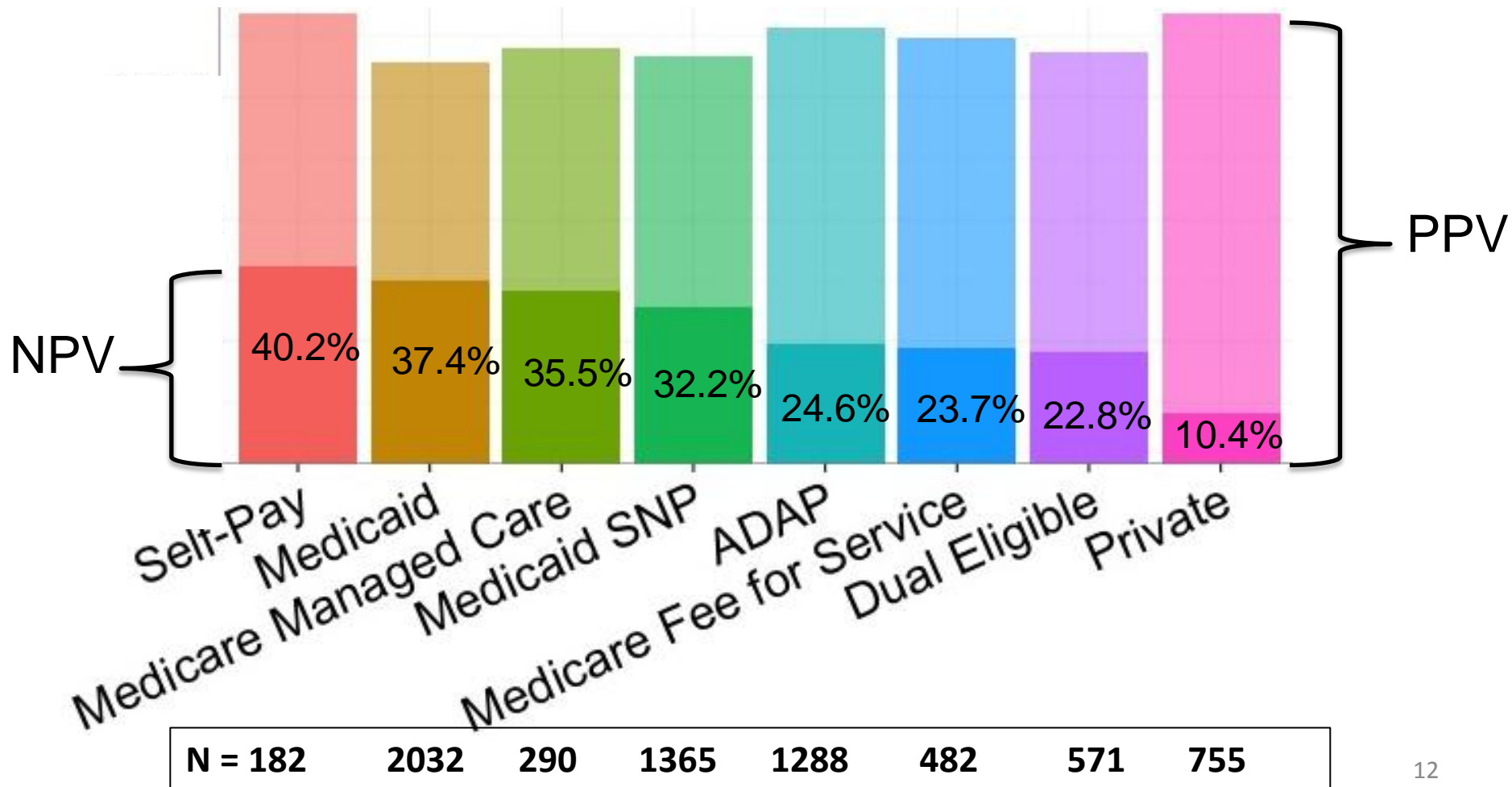
Incomplete engagement in care may be most deleterious for younger patients.

NPV: Percentage of patients not retained who did not achieve VLS



Retention and Suppression, stratified by Insurance Status

Incomplete engagement in care may be most deleterious for patients with low socioeconomic status.



Conclusions

- [1] A frequency-based retention measure displayed a weak association with suppression.
- [2] Retention in care may be more important for vulnerable populations.
- [3] Clinic- and jurisdiction-level treatment cascades may not accurately measure suppression.

