The Paradox of Retention

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


• 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.


• 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)

- **Race**: Male (60.7%) and Female (38.6%)
- **Age**: 25-75 years
- **Other Characteristics**:
  - 56.9% CD4 > 500
  - 86.7% stably housed
  - 20.9% Used Illicit Drugs

- **Risk**: MSM, IDU, Heterosexual, API, Unknown, Hispanic, White, Black

- **Hispanic**
- **Race**
- **Unknown**
- **MSM**
- **Risk**
- **API**
Inclusion Criteria


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

86 days
Viral Load Suppression, Stratified by Retention in Care

Retained

15% Not Suppressed Last Viral Load

85% Suppressed on Last Viral Load

N = 6,507 (79.2%)

Not Retained

29% Not Suppressed Last Viral Load

71% Suppressed on Last Viral Load

N = 1,706 (20.8%)

* Suppressed on final viral load of the review period
Clinical Outcomes of Unretained Patients

N = 1,706

Most recent CD4, cells/mm³

- 71% Suppressed on Last Viral Load
- 29% Not Suppressed Last Viral Load

- 9.4% CD4+ cells/mm³ ≤ 200
- 10.8% 200 < CD4+ cells/mm³ ≤ 350
- 15% 350 < CD4+ cells/mm³ ≤ 500
- 17.6% CD4+ cells/mm³ > 500
- 45.8% CD4+ cells/mm³ > 500

CD4+ cells /mm³
Statistical Measures of Validity

Positive Predictive Value

Proportion of patients who achieved retention and also achieved viral suppression

- 85%

Negative Predictive Value

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

- 29%
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.

N = 182         2032      290       1365      1288        482          571       755
Conclusions


[2] Retention in care may be more important for vulnerable populations.


Suppression should not be calculated on the basis of retention.